"TripleX" — the safety glass

THE SPHERE

Vol. CLXVI No. 2165 — WITH WHICH IS INCORPORATED THE GRAPHIC — JULY 19 1941

EVERY PHASE OF THE WAR ACCURATELY PICTURED AND DESCRIBED

KING SIX CIGARS

8D. each

MADE BY J. R. FREEMAN & SON, LTD.

MAKERS OF FINE CIGARS SINCE 1839

PADDY

OLD IRISH WHISKY

London Agents: Coverdale & Co., Ltd., 5, Mark Lane, E.C.3

MACVITA * MACVITA * MACVITA * MACVITA * MACVITA *

MACVITA

Delicious with butter, preserves or cheese but equally satisfying without. The best of English wheat—*at its best.*

Made only by McVitie & Price

TENNENT'S British LAGER

TRADE MARK

ESTD. 1745

THE LARGEST EXPORTERS OF BRITISH BOTTLED BEERS

J. & R. TENNENT LTD Wellpark Brewery, GLASGOW

FOR WRITING SATISFACTION—

SWAN PENS SWAN INKS

MADE THROUGHOUT IN THE BRITISH ISLES

DEAF EARS HEAR BETTER WITH 'ARDENTE'

War-time needs whether in Uniform or Civies make good hearing more essential than ever and "ARDENTE" is your way to Better Hearing. Whether hard-of-hearing or very deaf—for Church, Home, Radio, Talkies, Business, Sport—a real need satisfied.

NO CONSULTATION FEE—Call or write for details and Aurameter Test without fee or obligation.

Ardente, Ltd., 309, OXFORD ST., LONDON, W.1 (Opp. John Lewis. A.R.P. SHELTER IN BUILDING) Mayfair 1880, 1718, 0947.

MESSRS. DENT'S Ardente FOR DEAF EARS

THE WORLD'S GREATEST HEARING SERVICE

Test and Service Bureaux at *Birmingham, Bristol, Cardiff, Exeter, Glasgow, Leeds, Liverpool, Manchester, Newcastle.*

BY APPOINTMENT TO H.M. THE KING

GAYMER'S CYDER

SHIPPED TO ALL PARTS OF THE WORLD

Stockists on application

ALL CLASSES OF INSURANCE TRANSACTED

CAR & GENERAL INSURANCE CORPORATION LTD.

83, PALL MALL, LONDON, S.W.1.

REGISTERED AS A NEWSPAPER FOR TRANSMISSION IN THE UNITED KINGDOM

Office: Commonwealth House, 1, New Oxford Street, London, W.C.1

For Conditions of Sale and Supply of The Sphere *see bottom of last page of text*

WAR SAVINGS CAMPAIGN

3 per cent.—plus!

Why 'plus'?

Because in addition to the attractive rate of interest, 3% Defence Bonds have other big advantages.

Such as?

3% Defence Bonds never fluctuate in value, which means you can always get what you paid for them.

Any other points?

Yes. They are repayable after 7 years with a bonus of 1/- for each £5 invested; interest is paid half-yearly and Income Tax is not deducted from it at source.

How and where do I buy them?

In units of £5 through any Bank, Trustee Savings Bank, Post Office or Stockbroker, or by instalments by means of 2/6d. National Savings Stamps.

And if I have to cash them before the 7 years are completed?

You can cash them on six months' notice, or in case of private emergency, you can apply to the Savings Bank at which your bonds are registered for repayment of the purchase price, subject to a deduction equal to six months' interest.

Any limit to holdings?

No individual may hold, or have an interest in, more than £1,000 worth.

3% Defence Bonds

Issued by The National Savings Committee, London

NICOLLS

OF REGENT ST.

TAILOR THE BEST-FITTING UNIFORMS

COMPLETE KITS

ARMY
Essential outfit including buttons and badges. **£29**

ROYAL AIR FORCE
Full kit to Air Ministry Requirements. **£45**

ROYAL NAVY
Complete kit for Sub. Lt. R.N.V.R., including lacing. **£40**

Uniforms cut and tailored on the premises by expert West-End craftsmen ★ Travelling tailors always available ★ Best quality heavy weight materials only used ★ Full stock of accessories ★ Prices within grant allowances ★ Special facilities for payment pending grant.

MILITARY TAILORS FOR 130 YEARS

H. J. NICOLL & CO. LTD., 120 REGENT ST., LONDON, W.1. Tel.: REGent 1951

SHIRT SURVIVAL

A Summit Shirt owes its long life to three main qualities. Generous cut which safeguards against splitting. Woven-in, fast-dyed colours which keep fresh and new-looking. Experienced tailoring which never varies by a fraction. Rationing has made these qualities all the more desirable. Hundreds of patterns. Two collars with every shirt, and three sleeve lengths to every collar size. Prices 10/6, 12/6 upwards.

For the best Shirts your coupons can buy

AUSTIN REED

OF REGENT STREET

Bath, Belfast, Birmingham, Bournemouth, Bristol, Edinburgh, Glasgow, Hull, Leeds, Manchester, Norwich, Nottingham, Oxford, Sheffield, Southampton.

Volume CLXVI No. 2165

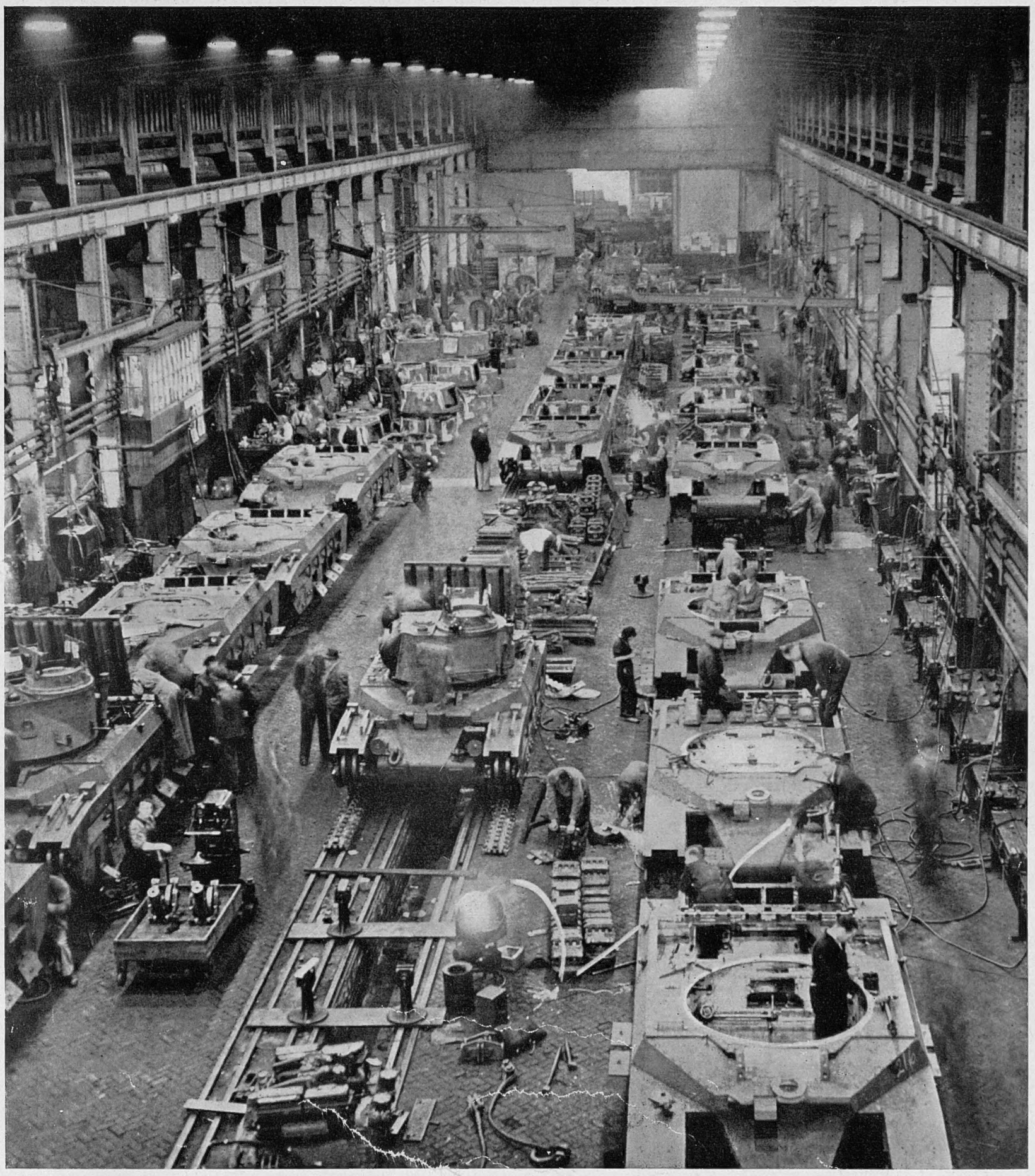
The SPHERE, London, July 19, 1941

THE SPHERE

With which is incorporated "THE GRAPHIC"

The Empire's Illustrated Weekly

London, July 19, 1941



BRITAIN'S GREATEST NEED AT THE MOMENT IS TANKS : THESE ARE NOW BEING PRODUCED BY THE HUNDRED IN OUR OWN FACTORIES, AS THE ABOVE HEARTENING PICTURE OF "WALTZING MATILDAS" SHOWS

The recent debate in the House of Commons on problems of Supply has drawn public attention once again to the realities of the present situation. Successive campaigns have each pointed out the need for Tanks, and still more Tanks ; and Members of Parliament are now demanding that the problems connected with the production of these vital arms be speedily met. The appointment of Lord Beaverbrook was the first step in a great forward drive ; and we are now able to present the picture published above and those reproduced on pp. 70-71 of this issue, as evidence of what is now going on in the Tank factories of Britain. Much of the work in these is now being performed by women, who are entering more and more into the field of production. "Waltzing Matildas" are seen by the score in the above view : their construction is being carried out on almost mass-production lines

Postage—Inland, 2d. ; Canada and Newfoundland, 1½d. ; Elsewhere Abroad, 2d.

A WAR NEWSLETTER —No. 98

1, NEW OXFORD STREET, W.C.1.

5 to 1 on Freedom.—

I feel it in my bones that there are quite a number of people in the Reich to-day who are resuming the function of educated men and doing a bit of private thinking on their own account. I dare say a big percentage of those who have resumed their private reasoning powers were a year ago confirmed, dazzled, doped Nazis. Most of them would probably call themselves Nazis still. They have seen the wonderful results which can be obtained when a nation gives its soul to one man and to one idea, and suffers itself to be organised to the last buckle for one purpose—murder, destruction, rapine, aggression. Those results are dazzling as far as murder, rapine, aggression, etc., are concerned. They have been, up to July 1941, quite 100 per cent. successful. To-day Russia is proving a more expensive proposition, and British air power has been having a rather unusually free hand in destroying German industries. The idea is permeating in a limited circle in the Reich that (*a*) the percentage of success has lately fallen; (*b*) the success was never wider than the terms of reference of the organisation. In a word, even when murder, rapine, etc., succeeded 100 per cent., the benefits accruing to the Reich did not correspond at the best peak with that *ad hoc* success. Now, even murder, rapine, etc., are less successful, and the benefits gained by the Reich are even further to seek. While Britain reaches nearer and nearer to the heart of German industry, while she takes a toll of German shipping proportionately as great as the damage she receives from Germany, while she maintains her ascendancy in the air over German fighters, America is harnessing her whole vast resources in output of munitions to those of the Empire, while Russia is taking such a toll of the Nazis in men, machines and petrol as in their coldest calculations the Nazi war leaders never contemplated. Germany has a population of about 70 millions, Italy of 40; throw in another 20 for Austria, Rumania, Hungary. Say that there are a round 150 millions who may be more or less actively engaged (so far as populations can be engaged) in war work of all kinds for the Nazis.

Tell-Tale Table. — To-day

in the cause of freedom the numbers so engaged (and so computed) on behalf of freedom number at least 800 millions. That is a fair computation, and it shows odds of 5 to 1 against the Nazis. Allowing that Germany had a long start, is still far better organised for war, has proportionately far more men per population actively engaged in war, and far more machines and munitions in her fighting forces, still the figures are arresting, thought-inducing, terrifying. The British Empire is working almost to a man—500 millions. America—the arsenal of freedom—has 130 millions. With one petulant gesture Hitler added to his active enemies a Russian population of 150 millions, of whom an astonishingly high percentage are actively engaged already in destroying Nazism. The percentage of Austrians, Italians, even Rumanians who have their hearts in the struggle we cannot calculate, but need not exaggerate. It is far lower proportionately than among the 800 millions fighting for freedom. The newly-reasoning German cannot but pause when he considers this tell-tale table. His Germany is wonderful. It has achieved miracles on paper, but in the long run the odds are impossible. The knock-out was the one chance. The chance of that knock-out has been fearfully reduced by the attack on Russia and by Russia's unexpected and destructive powers of resistance. Even if those powers gradually weaken, the chance is reduced. "There is a limit to what 70 million master-folk can do, and that limit is drawing nearer. It is 5 to 1 against Nazism in the long run. Is it possible that Nazism is doomed? Are all our sacrifices in vain? Is it to this that our Führer has led us like sheep? Is the story of 1918 to be repeated?" There is more than a new doubt in the hearts of newly-thinking Germans. There is the shadow of certainty.

THE ARRIVAL IN LONDON OF THE RUSSIAN WAR MISSION

Representatives of the Russian Army, Navy and Air Force have now arrived in London: their Mission is similar to that of our own Service Representatives who accompanied Sir Stafford Cripps back to Moscow recently. The Russian Mission is headed by Major-General Golikov, the Deputy-Chief of Staff of the Russian Army (in light tunic), with Rear-Admiral Kharmolov as Deputy (on right): the Russian officers were met by M. Maisky, Russian Ambassador in London (also seen in the above picture), and by a number of British high officers. The party is here seen on arrival in London as they left for the Russian Embassy in Kennington

Russia Means Business.—

In a battle waged without pause on a thousand-mile front and 200 miles deep, the Chief Accountant of the Bank of England could not be relied on for accurate figures of casualties in men and machines inflicted and received. But two weeks of the great Eastern front battle give us assurance that Russia means business, that the Germans have already denuded other fronts and called in a mass of reserves in men, machines and petrol to replace enormous wastage and casualties, and have far less to show for this wastage than the least optimistic of Hitler's advisers anticipated. Clearly Russia is inspired by a hatred of Nazism which is not going to peter out, and for months to come we may expect that the best of Hitler's vast army will be fully occupied on Russian soil. A month ago we had no inkling that a situation so beneficial to our cause could come about even by a miracle. Russia means business. Do we? The Russians are relying on our help; they constantly stress our loyalty as allies, they speak of their sacrifices as cheerfully given to avenge the bombing of London. It is significant, and we must not fail them; we must help them in *all* ways; with advice, with material, with air diversions, naval diversions and *land* diversions. And so must the enslaved nations, now denuded of their Nazi guards. *Now* is the time. If we let it go by we miss the opportunity for which we claimed six months ago we were training our armies for *attack*.

Cynicism or Bungling?—

"What a singular fellow Melbourne is to be chief of a Government in such a storm." So wrote Creevey to Miss Ord in 1836. Creevey had met him at dinner and hinted to him that the Reformers of Ireland were not so *loyal* as Melbourne supposed. "To which Melbourne replied, 'God, it is a curious thing, two or three people have made the same remark to me,' and then, after pausing, 'God, *perhaps it is so!*'" I am reminded of this example of Melbourne's lighthearted cynicism by some of the latest decisions of some of our chiefs of departments in this present storm, notably decisions on coal rationing, on eggs, on petrol reduction. . . . The restriction on the use of eggs by small private owners of poultry was one which the public would not stand, since it was patently imbecile. The decision on coal rationing, as announced, is intolerable, imbecile, unworkable. The public for a full year showed its desire to have the petrol rationing organisation tightened up, and made it perfectly clear that it regarded the existing machinery as outrageous and sheer murder of the Merchant Marine. The heads of departments concerned paid not the smallest attention; they went on with their paper schemes and easy ways. One day the voice of the public gets the Mandarin's ear, who learns the truth at last and sees the rottenness of his edifice. "God," he says, "perhaps it is so!" Is it cynicism or sheer incompetence?

Coal—a Black Record.—

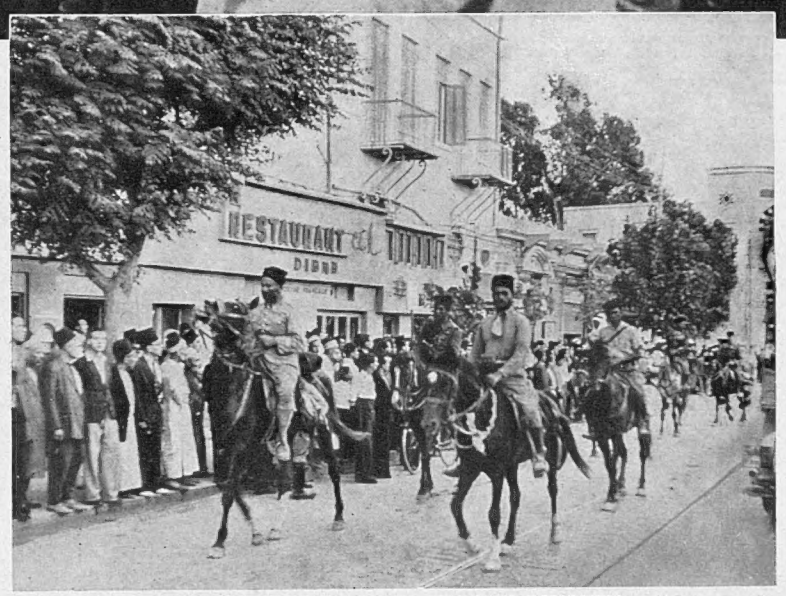
In all the records of departmental or official apologia, I doubt if any Minister ever more clearly admitted failure than did Mr. Grenfell (as also Mr. Nott-Bower) when he explained the new coal rationing regulations, and announced the *discovery* that war industries were demanding increased stocks. I dare say he was knocked over by being forced to take blame which is fairly to be allocated among many departments, with rival claims unco-ordinated centrally. I was sorry for him and I am sorry for the country and the war industries, the miners and the householder (not least the schoolmaster). If you go back and review the Government's spokesmen's advices and orders given to the public since the war anent home-produced fuels, the orders to store, the promises of plenty each summer, the assurances of transport difficulties overcome, and so on, and then review your own efforts to obey these hints and orders, and the results attained, you may fairly become a cynic concerning democratic Government in difficult times. If you review the war policy of the Government *vis-à-vis* recruitment to the Services as applicable to the mining industry, you can only shed a tear at the frailties of (what we are assured is) the best collection of administrative leaders the country can find. Their name is legion. Their administrative centre is called Babel. The tragic history of the administration of home-produced fuels during this war might fairly justify a cynic adapting for use a famous epigram: "Never before in the history of administrative endeavour have so many owed so little to so many."

Called-up Gardeners.—

The heart-breaking rigidity of agricultural executive committees in regard to Army recruitment is constantly in evidence. Here is one more case in point. X is a private gardener, very expert in the raising of vegetables and as an agricultural worker. He is turned forty and has an invalid wife and young children. Last year he raised enough vegetables to feed without recourse to the markets more than a dozen persons. This year he was raising more. He lives in a sparsely-populated agricultural area and weekly gives thirty and more hours of his spare and his owner's time to vital agricultural work on the nearest farm, where labour is very short. He has worked his way up to second in command of his H.G. section and is regarded as a key-man therein. It is a Section in a danger area, where the bulk of the men are away at Government work, beyond recall during daylight hours. He is about the only responsible N.C.O. readily available in daylight, should an emergency arise. But he is to be called up—to become, I suppose, an officer's batman or to tend an officers' mess flower garden—on the plea that the Army must have "young" men. How is it possible to argue that this man can be of more use to the country than where he now is? And within a three-mile radius of where he lives he could name a dozen men in the twenties, enjoying total exemption as timber cutters, who will not join the Home Guard or otherwise interfere with their recreational hours and nights' rest between 5 p.m. and 6 a.m.

THE OLD STAGER

THE INHABITANTS OF DAMASCUS WATCH THE ENTRY of British and Free French troops into the city. Note that all the women are heavily veiled



FREE FRENCH CIRCASSIAN CAVALRY, RIDING THROUGH DAMASCUS : These are the men who left Syria with Colonel Collet at the beginning of the campaign

THE WHOLE OF THE CITY'S POPULATION turned out to see the entry of British and Free French troops and transport after the occupation

WITHIN DAMASCUS, JUNE 21, 1941

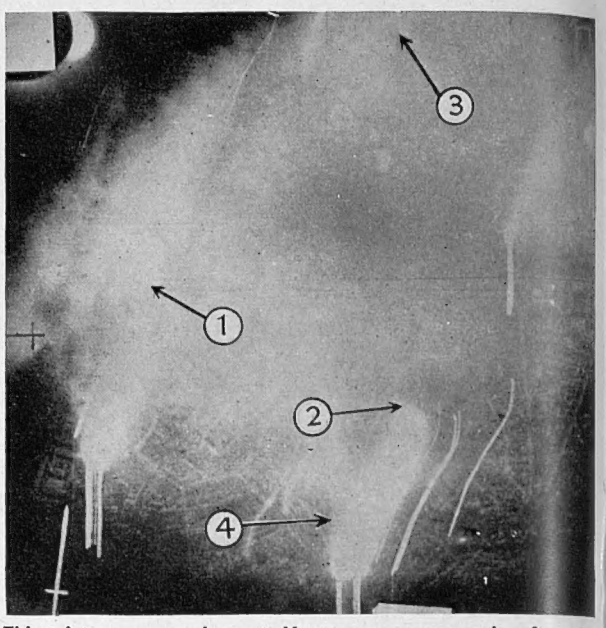
Within a very short space of time after the opening of the campaign in Syria, the Vichy forces were compelled to evacuate the city of Damascus, second only in importance to Beyrout, the capital. Damascus was occupied by British and Free French forces on June 21 : and they were cordially received by the mixed population. The capitulation of the city was, happily, accomplished without bloodshed, previous strategical moves by General Wilson's army to the south and west having rendered the Vichy defences untenable. Some little time after this important occupation came the news of General Dentz's request for an armistice and the end of organised Vichy opposition to the occupation of Syria

ON SATURDAY, JUNE 21, DAMASCUS WAS ONCE MORE IN BRITISH HANDS : Its occupation was one of the culminating points in the campaign against the Vichy forces who had been compelled to evacuate their positions around the important Syrian city on the previous day

MUNSTER, HEART OF WESTPHALIA: A PICTURE TAKEN BY NIGHT BY A BOMBER'S CAMERA. (1) At least 25 small fires are burning in the area of the main railway station. (2) A fire burning fiercely in the northern extremity of the aerodrome. (3) Fires burning to the east

The R.A.F.'s ATTACKS BY D

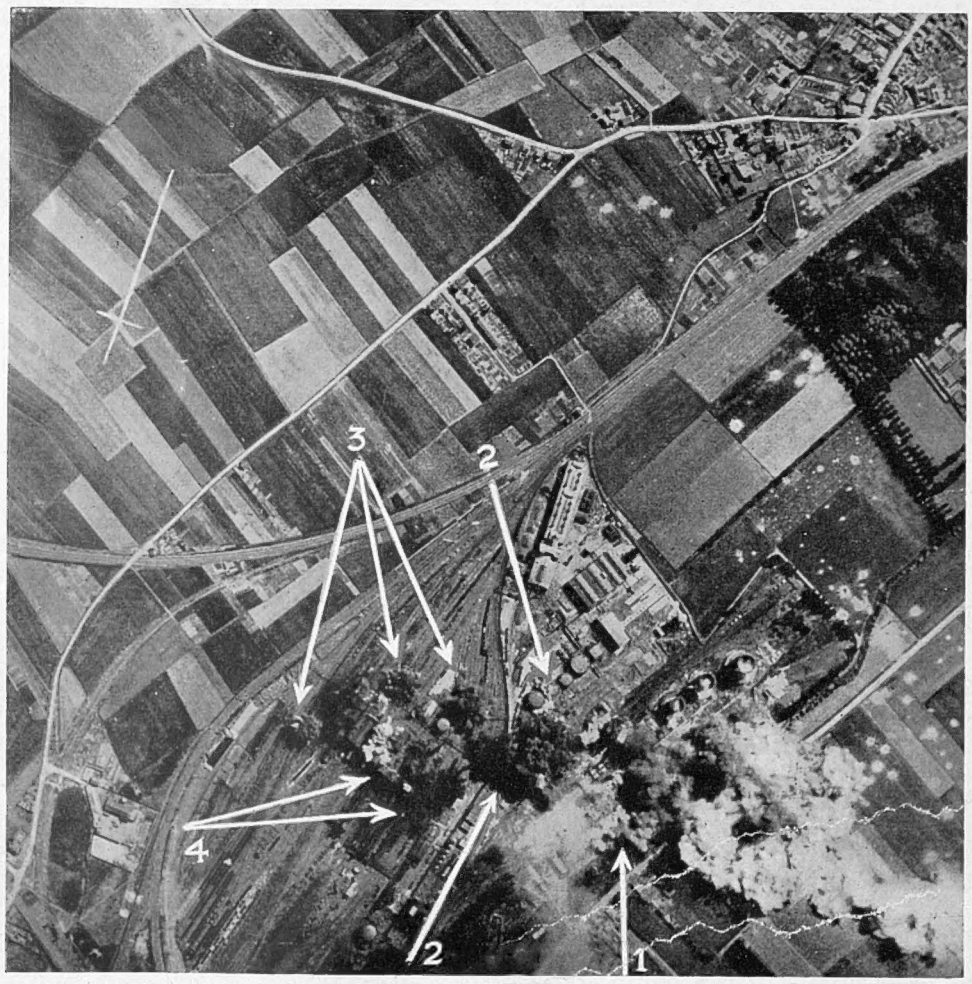
And Two Pictures of Germany's Vas Sch

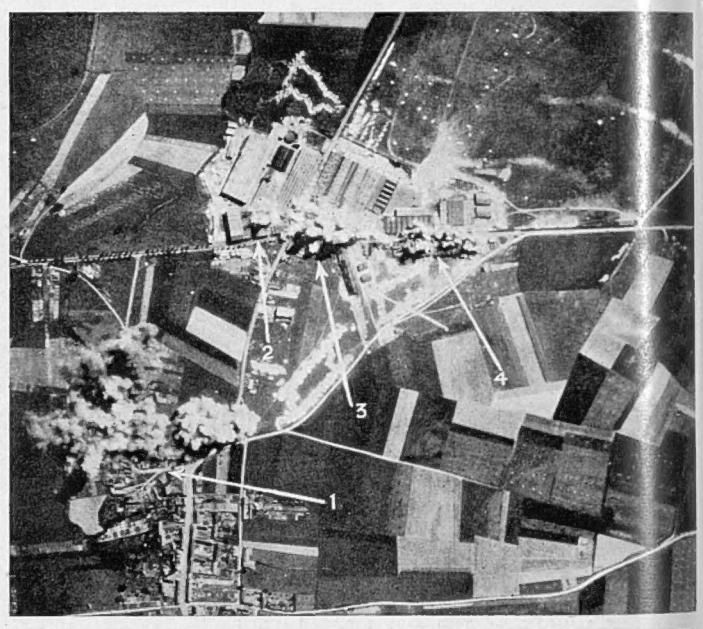


This picture was taken at Munster seven seconds after the release of one of the heaviest bombs

In the picture above, thick smoke, pierced by flames, is drifting over the area. There is no "flak" or searchlight. 1. Fires on the northern boundary of the aerodrome. 2. Fires in the south-east of the town. 3. Fires in the south outskirts of the town. 4. The main railway station. In the picture on the right, the thick bands of white are fiercely burning fires; the medium bands are incendiary bombs obtaining

The three pictures reproduced here were all taken by R.A.F. bombers whilst these were making a heavy attack on Munster, in Westphalia: they are official Air Ministry photographs which have just been released for publication. The public is familiar with night pictures of homeward-bound traffic and pedestrians with torches in the black-out: they understand that the white bands of light in such pictures are due to the fact that the plate has been exposed for a period, and that the camera is stationary and the traffic and-or the pedestrians are moving past it. In these pictures of the attack on Munster, the complication is that the aircraft, and consequently the camera, is moving. The three pictures were taken by the light of a flash-bomb, and the





THREE AIR MINISTRY PICTURES OF THE DAYLIGHT SWEEPS OVER NORTHERN FRANCE

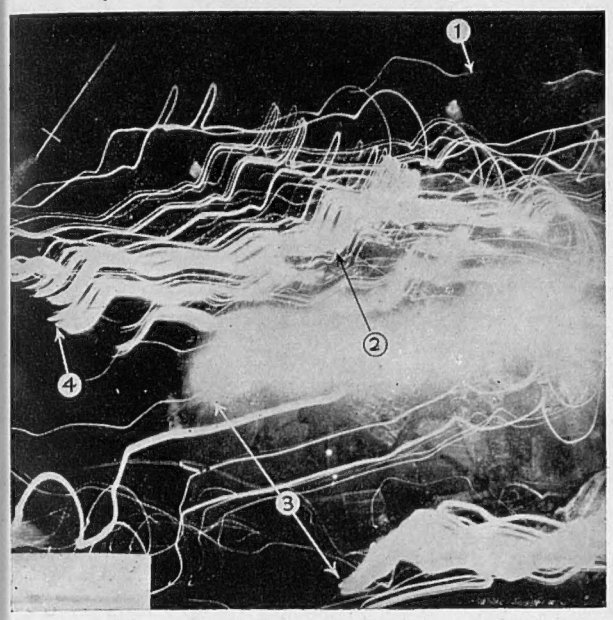
(*Above*)—**A DAYLIGHT ATTACK ON CHOCQUES:** The power house and buildings and gasholders of the chemical works were damaged, and rolling stock standing in the railway sidings was also hit. Chocques is three miles west of Bethune: the chemical works is reported to be engaged in the manufacture of synthetic ammonia; the power house is reported to feed the French grid system. In the picture (1) shows bombs bursting on the power house; (2) bombs bursting on the chemical works: two gas-holders have been damaged; (3) bombs scoring direct hits on rolling stock; (4) bombs bursting on what is believed to be a benzol and by-products plant

(*Above on right*)—**THE DAYLIGHT ATTACK ON THE POTEZ AIRCRAFT FACTORY AT MEALTE, NEAR ALBERT:** This is a very important production centre: This picture shows (1) bursts covering the north end of Mealte; (2) bombs bursting on the machine-gun shops and the spares store; (3) bombs bursting on shops and the west end of the main assembly hangars and offices; (4) bombs bursting on the general assembly shops

(*Below on right*)—**THE ATTACK ON AN IMPORTANT FRENCH RAILWAY LINE:** Here a direct hit is seen being scored on the railway line at Abbeville where it runs close to the River Somme. The picture shows (1) bomb bursting directly on the railway track, 550 yards south-east of the southern end of the marshalling yards; (2) and (3) bombs bursting on the south side of the railway track; (4) the River Somme

DAY AND BY NIGHT

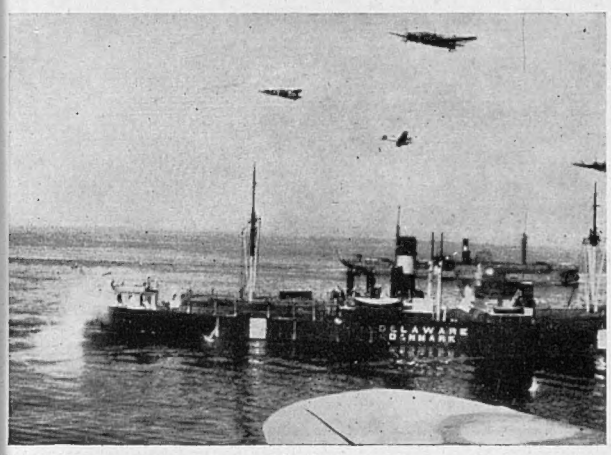
Scheme of Camouflage at Hamburg



During the height of the attack on Munster, one of the big industrial centres in Westphalia

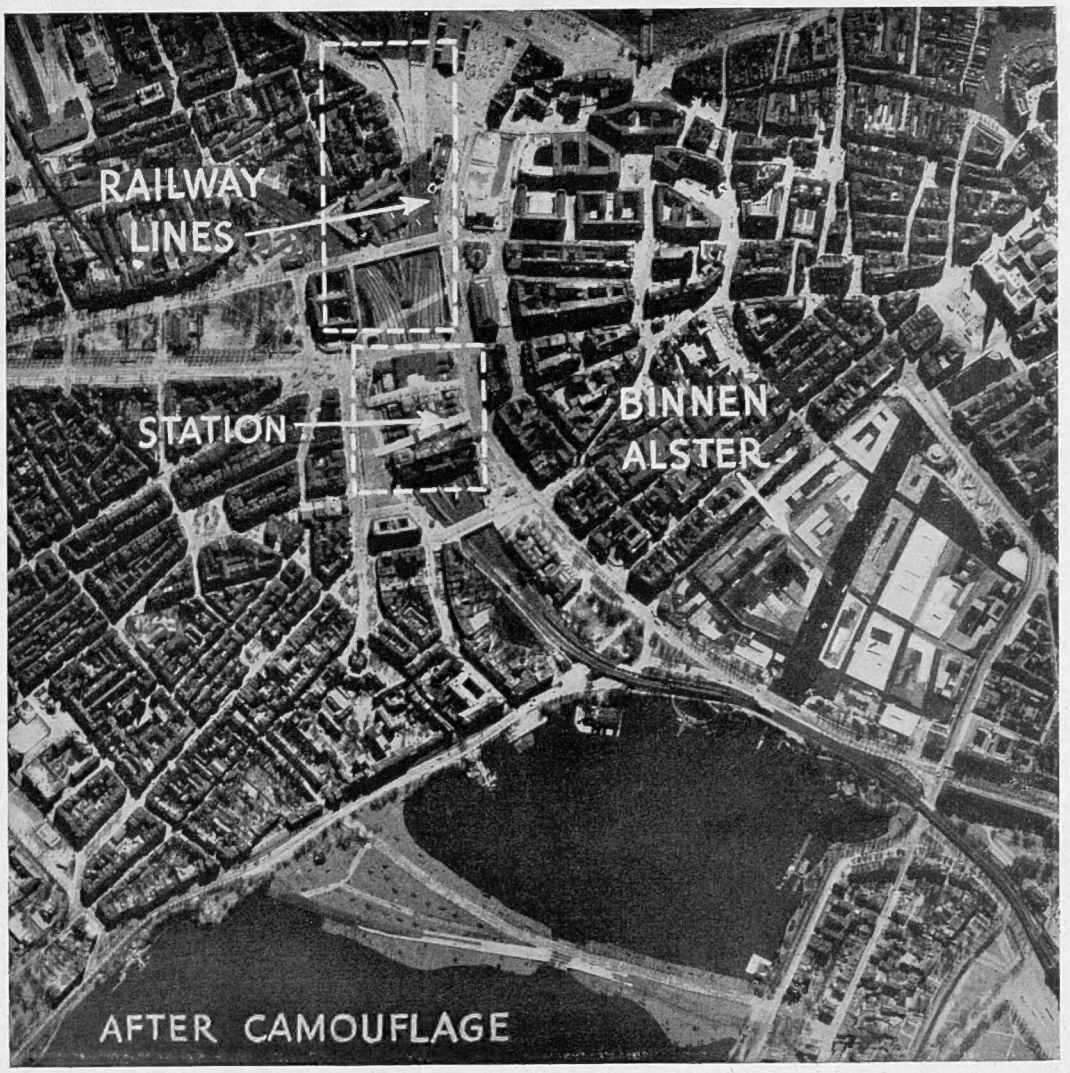
a hold ; and the thin bands are incendiaries beginning to burn. The "waves" are caused by the movement of the aircraft from which the picture was taken. 1. South-west corner of Munster aerodrome. 2. Bomb-flares west of the aerodrome. 3. Large fires north-east of the aerodrome. 4. Fires east of the aerodrome. *Note:* In the big fires, the focal point is roughly in the centre

procedure is that the shutter of the camera is opened and the powerful flash-bomb released ; a predetermined number of seconds elapses before the bomb explodes and illuminates the area : the shutter remains open for a further number of seconds, during which period the aeroplane is traversing the area and possibly "jinking" (zig-zagging violently), to avoid the enemy's anti-aircraft shells. The main features of the area are registered at the instant of the bomb-flash ; but the fact of the shutter remaining open for a number of seconds produces the bands of light which show up so strongly in the subsequent pictures



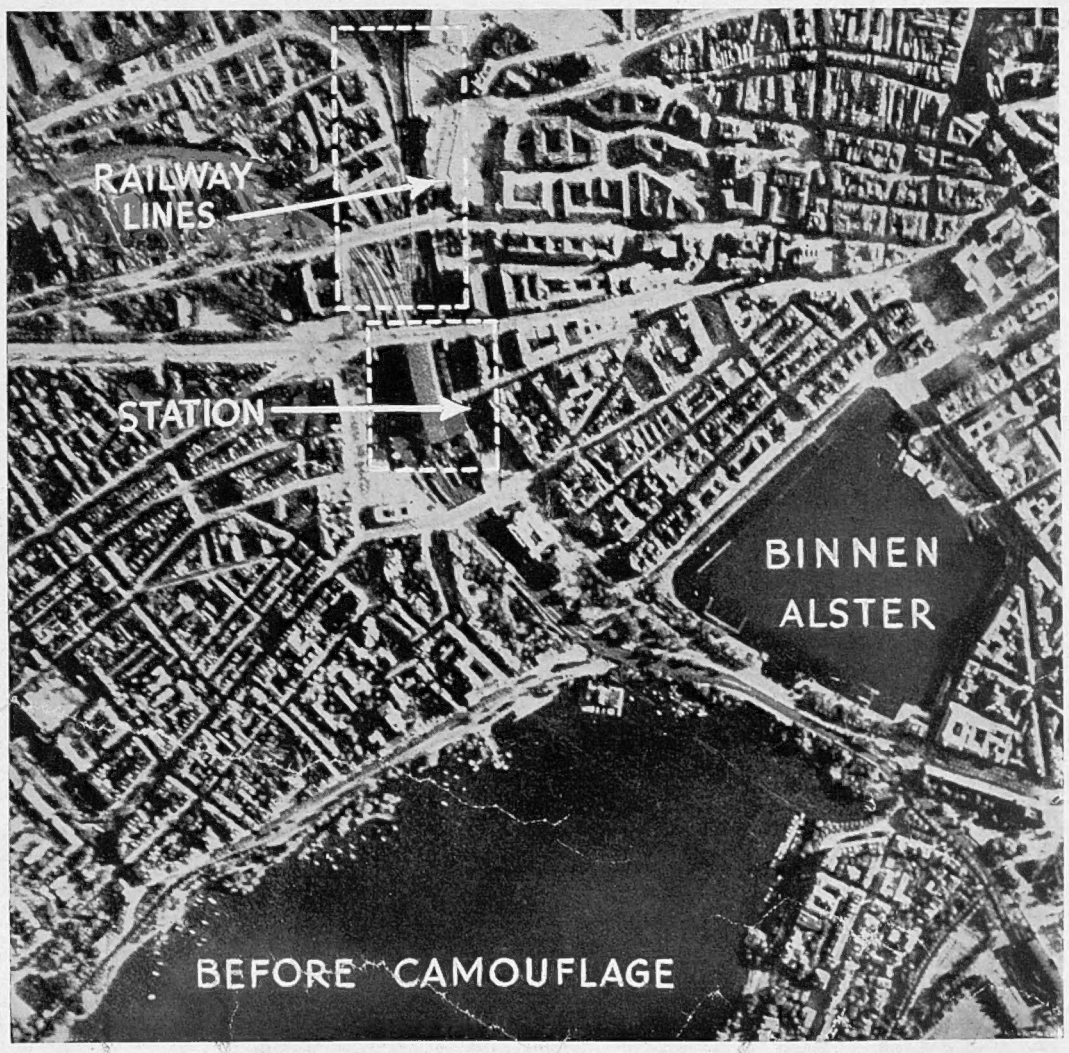
Daylight attacks on enemy shipping : Wide sweeps of the North Sea are being made by the R.A.F. in their search for enemy shipping. These two pictures show how the Blenheims go in to the attack : above is the Danish m.v. *Delaware* being bombed from a very low level ; and below one of the attackers is sweeping low over the sea, preparatory to turning and coming back for another run at the target

A BOMB BURSTING ON THE STARBOARD QUARTER : One of the Blenheims actualiy carried away the tip of the mast of the patrol vessel

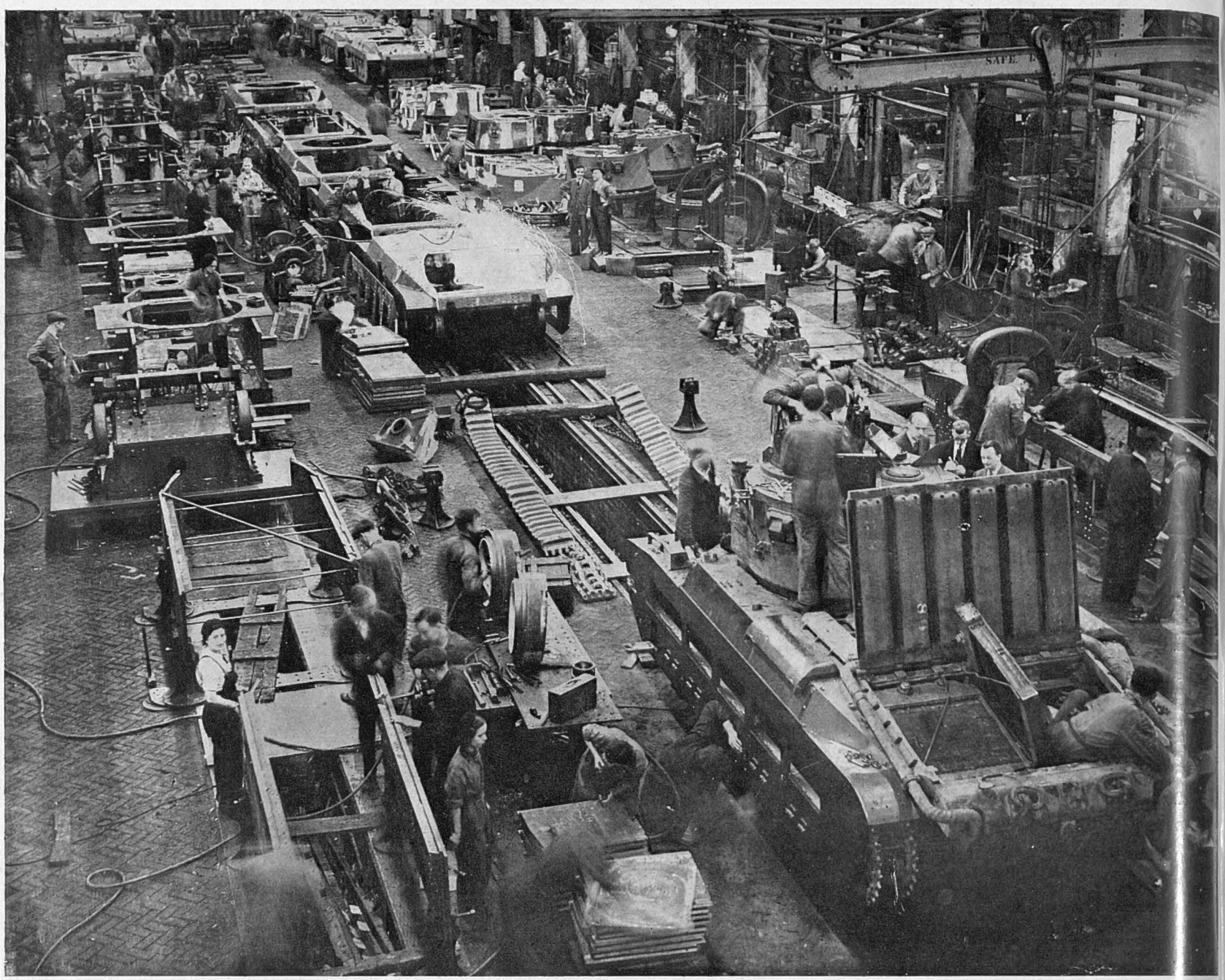


THE NAZIS ATTEMPT TO ALTER THE FACE OF HAMBURG! As the result of R.A.F. attacks the heart of the city has been altered by the world's biggest camouflage effort. *(Compare this picture with the one below)*

The Binnen Alster is the innermost of the two lakes in the very heart of Hamburg. It is here, and in the immediate vicinity, that the vital spots of the great industrial and maritime centre are concentrated. In consequence of the terrific and never-ending raids of the R.A.F., and in order to eradicate (or, rather, nullify) the effect of such prominent landmarks, the Germans have just carried out one of the world's biggest camouflage efforts. The whole of the Binnen Alster, or smaller lake, has been covered over by means of huge floating rafts—and on these a "built-up area," with a lay-out of street blocks, roads and a canal has been represented. A replica of the Lombardsbruecke Bridge, the vital road and rail connection between the Binnen and the Aussen Alster, has been constructed about 600 yards north of the original bridge : this bridge is the link between the two main Hamburg marshalling yards. The effect is to alter the whole aspect of the area as seen from the air, and to cause our airmen to waste their bombs harmlessly in the water ! In the upper picture the Binnen Alster (which figures in the lower picture as water, which it is) becomes a built-up area : the Hamburg Main Station has light-toned "roads" painted across the top of it ; and the railway lines have been treated similarly ; the "bridge" at the very bottom of the picture is just camouflage. As the R.A.F. have made such a fine picture of this camouflage attempt it is needless to point out that the whole German effort is wasted !



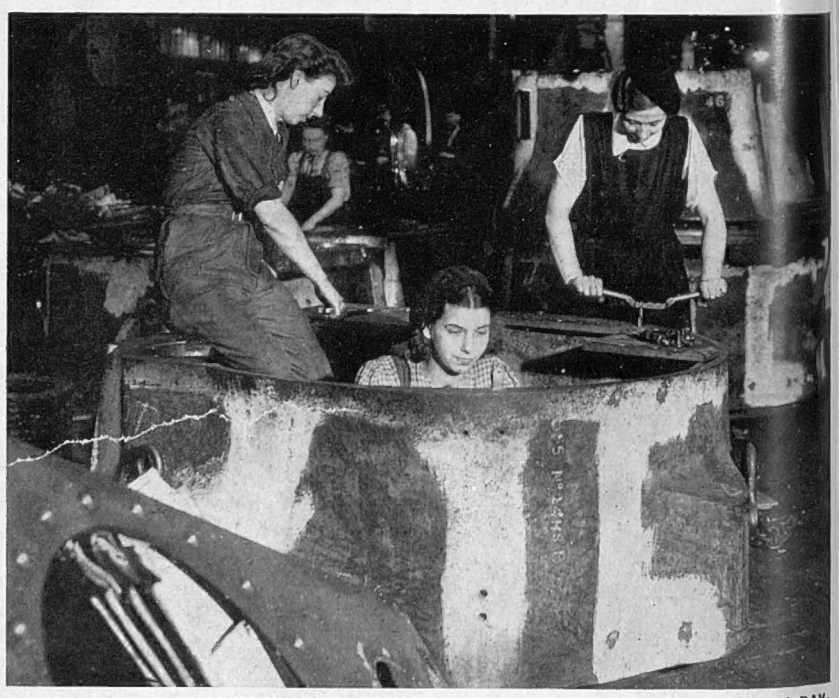
THIS IS HAMBURG BEFORE THE VAST CAMOUFLAGE EFFORT : The Binnen Alster area, showing the two stretches of water as they really are. The German artists have shifted the Binnen Alster bodily !



A GENERAL VIEW IN ONE OF THE WORKSHOPS OF THE MINISTRY OF SUPPLY: Where the flow of tanks is such that a steady stream of these necessary engines of war is now emerging on almost mass-production lines

TANKS IN THE MAKING

Women are now being employed in growing numbers in tank factories: at one North of England factory working for the Ministry of Supply there are 400 women workers. They are given one month's training at a technical school before starting in the factory; and this is the reason, it is claimed, for the low accident rate—5 per cent., as against 16 to 18 per cent. amongst the boys and 8 per cent. amongst the men. The manager of this factory has stated that he would be unable to carry on without the help of these women



Above and on left—**WOMEN ARE PLAYING A LARGE PART IN TANK PRODUCTION TO-DAY:** The women on the left are working on a heavy gun turret on a "Matilda." Above, three girls are fixing a turret housing: they are—Marie Webster, aged twenty-one, former farm housemaid; Elsie Dalton, aged twenty-two, housewife; and Mona Maloney, housewife

IN ADDITION TO THE "MATILDA," THE NEW "VALENTINE" IS ALSO BEING PRODUCED HERE: Whereas the "Matilda" is the Mark II. type, the new "Valentine" is the Mark III. It is fast, heavily gunned, and very deadly: it weighs 16 tons. In the main turret—besides a Besa gun—is a two-pounder capable of piercing any German tank yet encountered in the field: the road speed is over 15 m.p.h., and for the weight of guns and armour carried it is faster than was expected

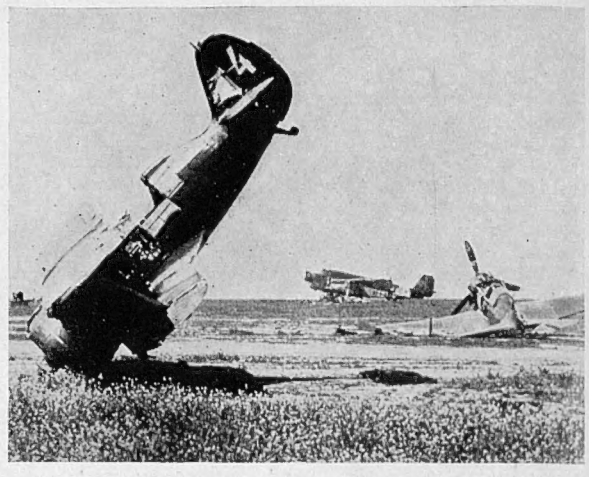
CANADA, TOO, IS NOW PRODUCING "VALENTINES": On the same day that details were announced of the British "Valentines" there arrived this picture of the first tank ever produced in the Dominion of Canada. It is seen here operating in the grounds of the big Angus workshops

AFTER ITS COMPLETION IN THE TANK FACTORY, THE "MATILDA" IS DRIVEN THROUGH THE STREETS TO THE TESTING GROUND: Later the very considerable armament will be added, and the tank will then be ready for action in the field

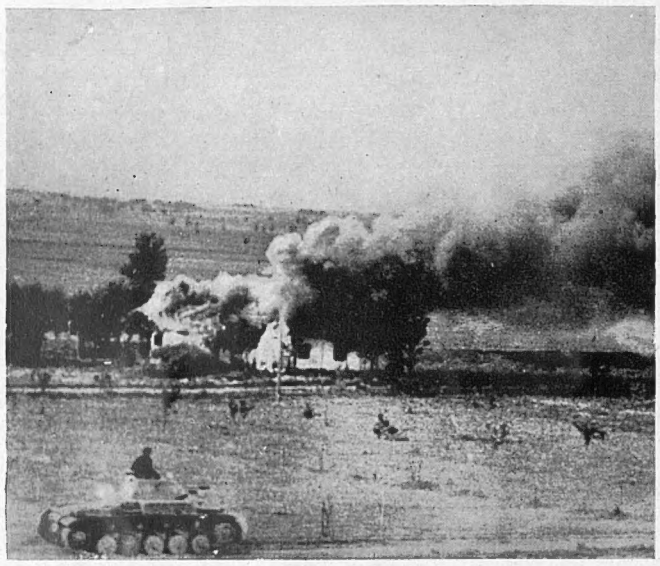
"The SCORCHED EARTH"

How the Russians are Carrying Out Stalin's Orders—*First Pictures from the War Zone in Russia*

HOUSES FLAMING FURIOUSLY IN A RUSSIAN TOWN AS THE GERMANS ADVANCE : This place will hold few comforts for the invader when he comes into occupation of it

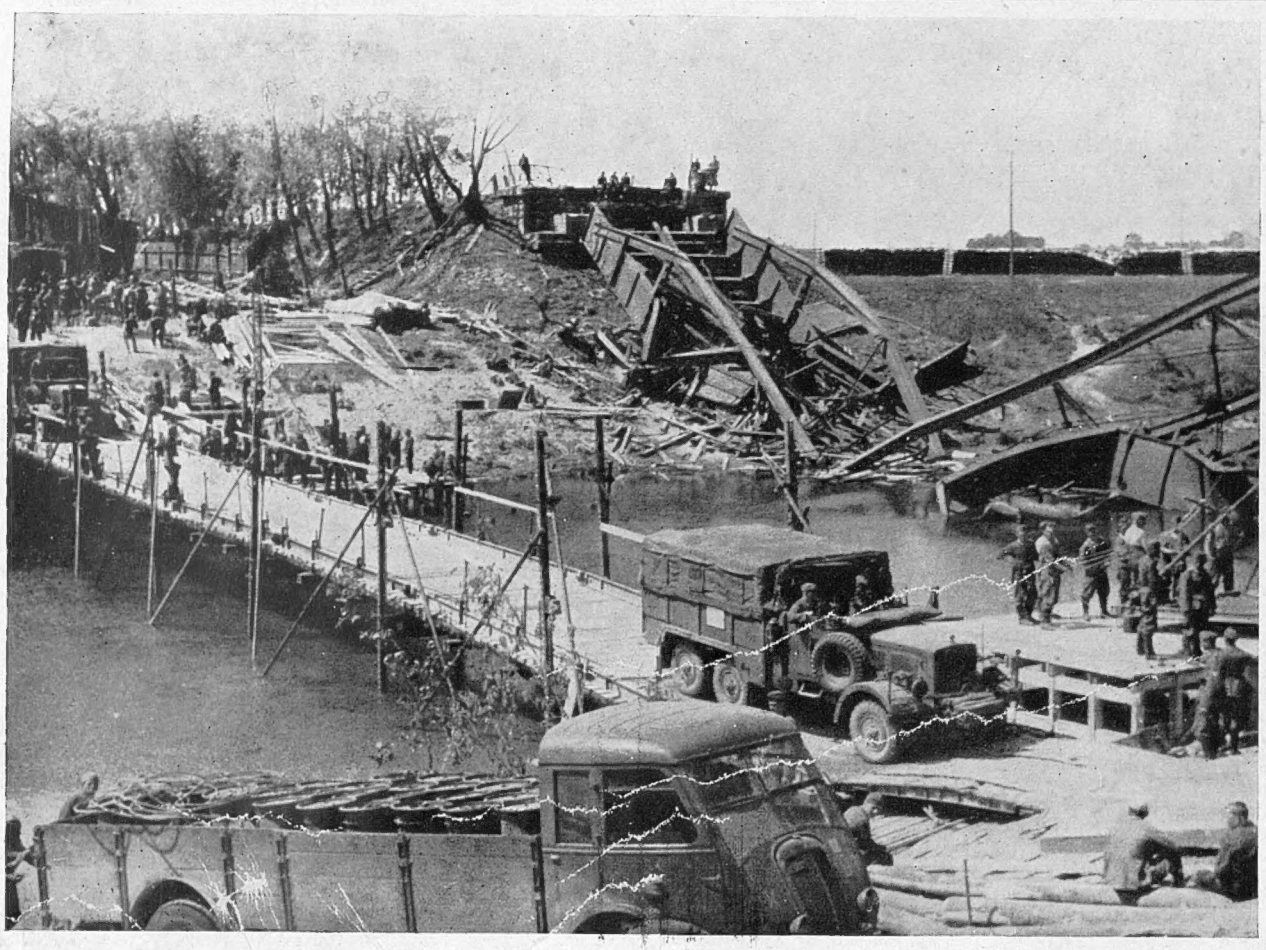


A FINE RECORD OF THE FIERCE AIR WAR ON THE RUSSIAN FRONT : Two Russian planes with short fuselage (a type seen in the Spanish War) brought down during the earlier attacks over Polish-Russian territory. Behind is an undamaged German plane



A FARMHOUSE ON THE OPEN COUNTRYSIDE BURNS ITSELF OUT : This lonely little farm, in typical West Russian scenery, has been set on fire by the retreating farmer. The advancing Nazis on the road in the foreground get nothing in the way of food or other supplies

THE TRAIL OF SMOKE WHICH MARKED THE RUSSIAN RETREAT FROM POLISH RUSSIA : Wooden fences and houses provided ready means of "scorching the earth." In the recent great heat, the buildings flared up instantly when fired by the Russians



THE GERMAN ADVANCE SLOWED DOWN BY THE DESTRUCTION OF BRIDGES

This picture shows on the right a steel girder-bridge which had been destroyed when the Russian forces retired. On the left the advancing Germans have had to construct a light bridge at a lower level. It is supported on steel uprights

In his broadcast to the Russian people at the outbreak of the war between his country and Germany, Stalin said that in the case of retreat "We must not leave a single pound of grain. . . . Forests must be fired, bridges blown up, trains wrecked. . . All valuable materials that cannot be taken away must be resolutely destroyed. It is necessary to create in invaded areas unbearable conditions for the enemy and all his accomplices." How this is being done, how literally Stalin's orders are being followed, is shown in the pictures on this page—the first to reach England from the new zone of war. From German sources, one learns of the fury and resentment of the Nazis at this all-in form of warfare as practised by the Russians. Hitherto, their conquests have always carried them into territories "swimming in fat," as Hitler himself has put it. In Russia, as they advance, the Nazis are finding desolation and destruction which it will take them months to repair. And their advance is being held up everywhere owing to the absence of food, petrol, and the other necessities they had hoped to obtain in the invaded territory itself

AMERICA FORMS a SCREEN of ATLANTIC ISLANDS

—Part of Her New Strategy of Securing the American Mainland from Axis Attack by Air or by Sea from Enemy Island Bases Out in the Atlantic Ocean

Described by
FERDINAND TUOHY

PRESIDENT CARMONA, Portugal's veteran soldier Chief of State, should by this time have landed on the Azores, eight hundred miles in mid-Atlantic, from Lisbon. Officially, the visit is to review the local defences, but it has a deeper significance. Behind it—and not a bit far behind it—lies the urgent question of how far a small and weak nation, however well-meaning, should these times be allowed sole say in securing the protection of strategic territory whose inviolability is a matter of far greater importance to bigger countries fighting for their lives.

With wild marauders like the Nazis at large, capable of any aggression however far-fetched, ought there not to be some form of pooled defence of such territories, which are usually the relics of once great empires? It is difficult to comprehend on what grounds a small possessing nation can legitimately object to such an arrangement as the United States have recently come to with Iceland. Here you have the bigger nation taking over the defence of the smaller, with the sole object of forestalling Hitler. Of course, the bigger nation has to instil trust, but America is so trusted. And therefore the Icelanders feel themselves thoroughly guaranteed when Washington promises to:

Withdraw all military forces immediately at the conclusion of the present war;

Recognise "the absolute independence and sovereignty of Iceland" and to see that the eventual peace treaty shall reinforce these;

Not to interfere with the Icelandic Government during the occupation;

To organise defence so as to ensure the greatest possible safety to the inhabitants, and to further Iceland's interests and wants in every way.

What could be handsomer if, say, applied to Eire or to the Azores?

But unfortunately we have not arrived at that stage yet. Portugal says no, and Eire does not consider the question to have arisen. Portugal says she feels perfectly well able to defend a vital group like the Azores against all comers, and, to emphasise her attitude, has been sending out additional infantry, artillery and specialised troops. President Carmona's visit determines the matter in Lisbon's view. But does it in America's? Apparently not, since we learn that U.S. expeditionary units are being held in instant reserve lest the Axis should try any tricks.

The Azores would be a rich prize for Hitler, should he again be in a position to turn his full attention to the west. From this group, with its fine harbours and air bases, he could approach within striking distance of the outer Panama defences, and harry as never before shipping communications in the Atlantic. He could sever the chief cable communications between Europe and America and their only regular passenger air service. The whaling station at Fayal would also fall to him, and the even more important Clipper base at Horta.

The chief risk to the Azores would seem to reside in some lightning move by Hitler on the Iberian Peninsula, acquiesced in by others unable to prevent it. His nearest planes at present, to the Azores, are at Bordeaux and Casablanca. From Mérignac airfield at the former city, to Horta, is all of 1,100 miles, but the Focke-Wülf long-range bombers in service from Mérignac have for many months ranged fully that distance into the Atlantic to attack our shipping. Supposing a fleet of them suddenly swooped out of the blue and alighted at Fayal or Horta? Such a happening cannot be entirely ruled out, although an easier approach would be from Casablanca, where the air installations are all in Nazi hands already. Thirdly, there is the danger of a leap first on Lisbon, and then onwards to the vital islands. Meanwhile, America maintains the most vigilant watch and, at the first sign of Axis preparations to leap, we may be sure Washington will move to resolute forestalling action.

This is part and parcel of America's new strategy of Atlantic defence by the use or surveyance of a screen of islands, great and small. There shall be no hopping in her direction if she can help it. From Arctic to Antarctic the Roosevelt Administration is planting boards marked "Keep Off Here!" Several of these "boards" are not even situate on American territory, but that makes no odds.

Greenland may be hard to contemplate as an island, yet it is the biggest island in the world. The Americans are now firmly established there, having on the way north looked in on Prince Edward Island, where one of the new leased bases is being erected.

Next came the big hop over to Iceland, where the Americans are for the first time located in the Eastern Hemisphere without being actually at war therein. It may be that the American arrival in Iceland enabled ourselves to make stronger dispositions on the exposed Faroes and Shetlands. The Faroes, which we took over from Denmark at the same time as Iceland, are a valuable group less than 400 miles from the Nazis in Norway. Seventeen of twenty islands are inhabited, and there is a prosperous whaling industry.

BRITISH TROOPS AND EQUIPMENT IN ICELAND: It has been stated that there are 80,000 British soldiers in Iceland, where they have been in occupation since the Nazi invasion of Denmark, holding the island against a possible enemy invasion. These men will soon be reinforced by U.S. soldiers who, it is stated, will now share the occupation with Great Britain. This official picture was taken recently in Iceland: it shows both the nature of the country and the type of equipment in use with the British Army

The next island to interest the United States is all too clear—Ireland. If the Nazis leapt to Foynes and Galway, they'd be on their way westward. Galway is called "the Gateway of the West" and here and northward American "bhoys" formed part of the coastal defence in the last war. How right and easy—easy on the local Irish—it would be to have the sons of those "bhoys" back again guarding this coastline which has become almost as important to America as it is to Britain. How simple it could be for Washington and Dublin to agree upon an Icelandic Pact for the duration. How strengthening for each. Many months ago I wrote of "The Breton Thorn," and I still adhere to the belief that any invasion of these islands would considerably involve territory west of a line drawn, roughly, from Cherbourg to Belfast. While it is highly probable that a Nazi swoop on Eire would immediately provoke the Irish-Americans to action and to U.S. armed intervention, what a pity that one cannot arrange for the defence of Eire *before* and not *after*

What, one wonders, has supervened on the French Atlantic islands of Ushant, Belle-Isle, Groix and Oléron, to name the most important ones taken over by the Nazis? They are too close inshore to be of any consequence to the Battle of the Atlantic—unless Oléron is being used to hide U-boats. Belle-Isle and Ré are certainly being used as concentration camps, and not for the first time.

And so one shoots abruptly out to the Azores and across to the Caribbean Island fringe, upon which America sets so much store for the defence of Central America and the whole Panama Zone dividing the world's two greatest oceans, and whose Canal enables the U.S. Fleet to pass swiftly from one ocean to the other—invaluable saving. If not in name, America now exerts full defensive authority over all the islands of many nations that go to form the Caribbean chain. This very week she is establishing her latest base at Carenage Bay in Trinidad. A second base is rapidly being installed on the mainland in British Guiana. Others are in operation on Bermuda and Barbados. The main heretofore U.S. base has been at Puerto Rico. Several of the Caribbean Islands are Dutch and these can now be trusted even as the British islands. The Danish units were purchased, and almost the only other islands still in foreign possession are French, which have to be watched closely.

So much so, that the Americans have thought fit to inaugurate a naval patrol off "Vichy" Guadeloupe and Martinique, and to maintain naval observers ashore. It was to Martinique that Darlan tried to smuggle over two hundred highly suspicious "refugees" . . . as if Darlan cared for German refugees, the genuine ones among whom he promptly handed over to the Gestapo! Martinique is watched in part because much of the gold of the Bank of France lies there, and as Vichy has been giving other people's gold to the Germans—notably Belgium's — the ownership of Martinique's hoard may be challenged.

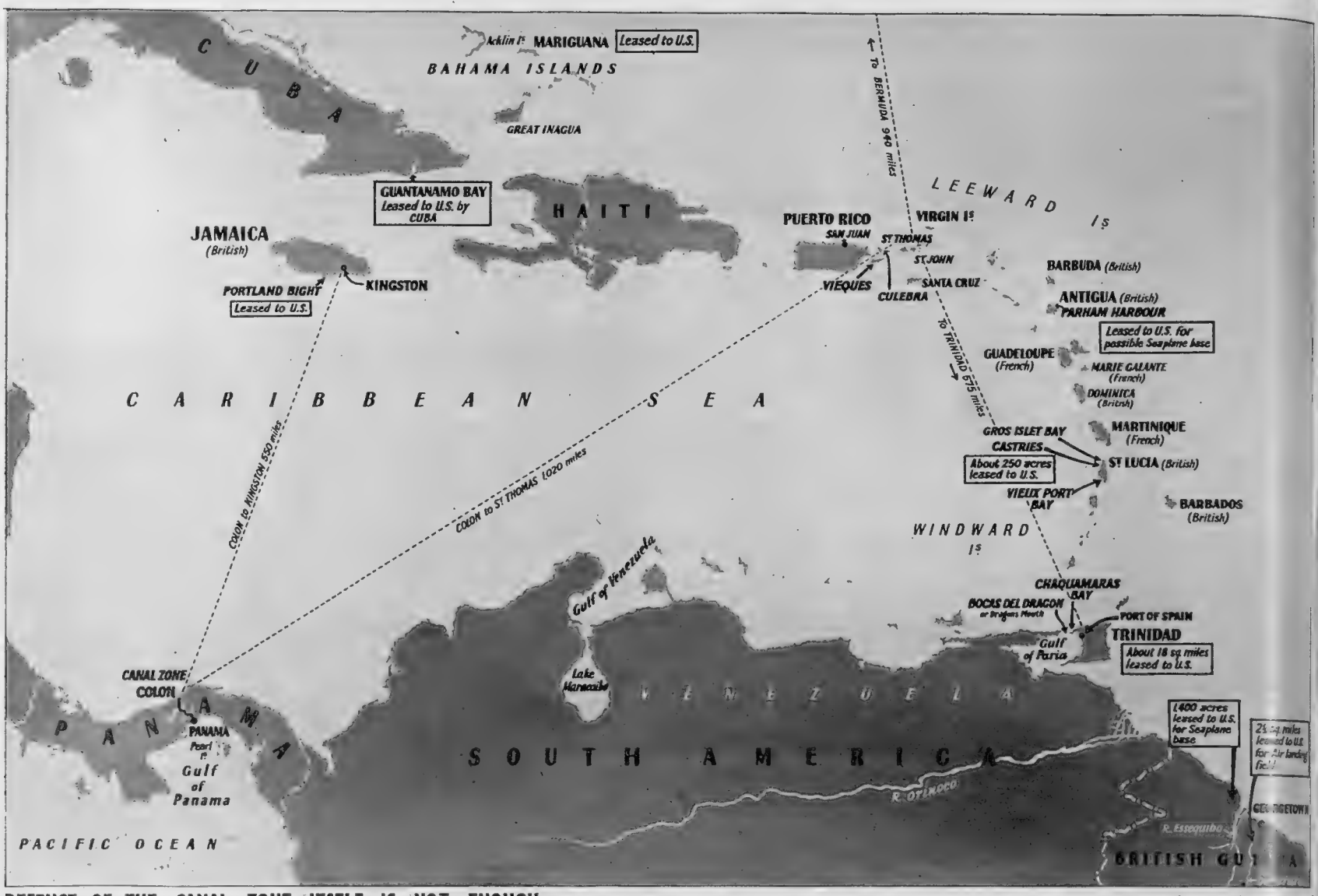
If the United States have assumed a positive and permanent hold on the whole Caribbean, anxiety once again arises on a hop back to this side of the Atlantic. The Cape Verde Islands, three hundred miles off West Africa, are the clearly designated stepping-stone for any Axis swoop on South America, notably Brazil. Here, again, the Portuguese profess their complete ability to hold the group against any who might challenge. One only wishes one could honestly profess a similar confidence—but consider the situation. The Cape Verde group is made up of fourteen different isles with a native population of 130,000. One says "native" because there are very few whites, although the garrison has latterly been increased. The climate does not make for even Portuguese settling. In short, a Fascist "ideological" swoop on the Verde group, executed from the near-by Moroccan coast, could be an easier proposition than a descent on the Azores. It is worth recalling that Fascist air liaison with Brazil, which was in the hands of Bruno Mussolini, invariably took in the Verde group.

Young Mussolini was also constantly alighting at Las Palmas and Santa Cruz, on the Canaries. Of course, Italians would have far less to say in any expansionist enterprise now, yet the *Luftwaffe* may well have adopted some of the Italian ideas for expansion dating from the flamboyant days of Balbo's flying squadrons. At any rate, the Canaries constitute a potential menace as long as the riddle of Franco Spain in this war remains unanswered.

Any blocking of the entrance to the Mediterranean is not accepted by the United States, which are therefore no less interested in the Canaries than ourselves. Nor can the harbour of Funchal, on Madeira, be left without mention. Any totalitarian or Axis or Hitler-directed move on the South Atlantic and beyond would take in all these islands. And a final one to the south: Fernando Po. In Spanish hands, the harbour of Port Clarence commands the entrance to British Nigeria and the Cameroons, now in Free French hands, but formerly German. Fernando Po is a fair size: forty miles by twenty. If only about 500 whites can normally stand the steaming, fever-ridden climate, the island could be of strategic importance.

One of the best notions I have heard bearing on America's new conception of protective defence in the Atlantic is that she should be persuaded to take over ground for an aero-naval base in Gambia or near Freetown, over the second of which Vichy pilots are wont to hover quite a lot. Both, of course, are British possessions, so that there would be no difficulties there. And the United States would be spanning the South Atlantic, forestalling any possible effort by Hitler in the same line.

b



DEFENCE OF THE CANAL ZONE ITSELF IS NOT ENOUGH: The United States authorities have therefore protected the Canal with a screen of naval and air bases which form an arc of defence of a very formidable nature around the Caribbean Sea—*A special "Sphere" map*

The manner in which the United States has secured the approaches to Panama is fully described in the article by Mr. Springer below. His despatch from America is a striking testimony to the manner in which the authorities are facing up to the realities of the moment. Meanwhile, recent reports from Panama have indicated that Canal harbours are in future to be closed after sunset, and action has been taken against trespassers in the restricted waters on the Pacific side of the Canal where it is reported that five mine-fields have been laid

The DEFENCE of the PANAMA CANAL

An American Writer Describes How the United States Is Now Guarding This Vital Zone Against All Possible Attack from the Sea or from the South American Mainland

"THE Panama Canal is a gleaming target," a prominent Government official told me recently; "and we must do everything in our power to defend it. This is not easy, because, if a squadron of hostile planes ever reached it, one of them would almost certainly make direct hits; and there are points at which one such hit could close the Canal completely."

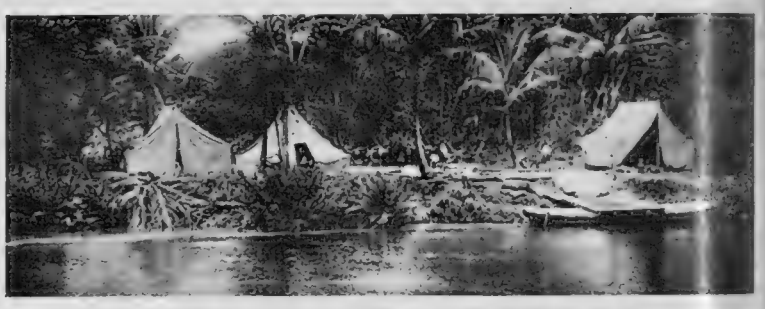
We are working hard and rapidly, but the time element is certainly against us. Our policy of acquiring Caribbean bases began shortly after the war with Spain. Between that time and this, however, very little has been done until the United States recently acquired lend-lease bases from Britain.

The base at Guantanamo, though excellent, is too small for our needs, and it is now to be supplemented by the new base on Jamaica. San Juan de Puerto Rico, combined with Viegues Sound, Culebra Island, and St. Thomas, is our present chief base, and will remain so. *But there are at least six other passages in the Caribbean through which a hostile force could reach the Panama Canal;* and the new bases have been acquired to stop these gaps.

It is believed that these new bases, when completed, will make an air attack on the Canal impossible, and that, if it became necessary to shift part of our Pacific fleet to the Atlantic before our new two-ocean navy is completed in 1946, these islands will protect the Canal bottle-neck.

At present, our new base in British Guiana is our most advanced outpost. About 30 miles up the Demerara River from Georgetown, it covers the area of hard ground that is nearest to the Atlantic Ocean. There, near Hyde Park (not named for President Roosevelt's home village), the British have leased us approximately 2½ square miles for an army air-landing field. Up the parallel Essequibo River, at the nearest point where it widens sufficiently to serve the purpose, the British have leased us 1,400 acres. Here we are to establish a seaplane base.

This Guiana base is about 375 miles from *Trinidad*, the most important of our new advanced outposts, where, in the Gulf of Paris, land-locked, and not far distant from our good friend, Venezuela, there are ample fleet anchorage and take-off for seaplanes. Seaplanes must have about three miles of smooth water for surface operation, and there must be no mountains or high hills ahead of them when they take the air. This rules out Barbados and Grenada, which look good on the map. The British have leased us the *whole north-west Cape of Trinidad*, about 18 square miles, with three water-frontages: on the Caribbean; on the Bocas del Dragon, through which ships enter the Gulf of Paris; and on the Gulf itself. The immediate landscape is lofty and rugged, offering numerous sites for gun emplacements by which the approach to the Gulf can be controlled. At Chaquamaras Bay there are several piers, and a dry-dock for naval repairs probably will be constructed there. Seaplanes will have the whole Gulf of Paris to take off from.



AN ENTRANCE THROUGH THE JUNGLE TO AN ANTI-AIRCRAFT BASE: The apparently ramshackle landing-stage seen here is the riverside entrance to a powerful A.-A. gun base erected by the United States within the Canal zone. The picture was taken on the Atlantic side of the Canal where dozens of strong points are being set up. Lumber gangs have been hard at work clearing patches in the dense jungle

THE U.S. ARMY FIND THE RUINS OF A SIXTEENTH-CENTURY FORT: During the work of thinning the jungle for the erection of A.-A. points, the soldiers came upon this old circular fortress of San Lorenzo. The older pieces in the stockades will now be replaced with more modern pieces of ordnance!

A second highly important site leased to us in Trinidad is the *Valencia area*, about 18 square miles, situated in the centre of the northern half of the island. Mostly savanna, it nevertheless includes enough of the Cerro del Aripo Mountains to ensure an adequate supply of good water. It will be used as an army landing-field and as a troop-training centre.

Another lease in Trinidad is that of two square miles near Longdenville, which will be developed as an auxiliary landing-field.

We have leased a site on St. Lucia, not because it offers a particularly desirable situation, but because it commands Martinique, where we confidently expect trouble. The site is on the southern side of Vieux Port Bay, including the only considerable flat shore area and a protecting island, together with a sufficient inland area to permit the construction of runways.

On the northern end of the island, we have leased about 250 acres some five miles from the harbour and town of Castries. This site is located on Gros Islet Bay, where seaplanes can take off in moderate weather. This is the place from which the British Navy watched over Martinique during the eighteenth-century wars, and it was here that Admiral Rodney's fleet assembled before it set out to meet Admiral De Grasse near Guadeloupe, and to win one of the greatest naval victories ever fought under sail.

Antigua, unlike other West Indies Islands, is scalloped with harbours, but only one is large enough for use as a naval base. That is on *North Sound*, and includes Parham Harbour, on the windward and undeveloped side of the island. Here another seaplane base will be developed. It is about five miles from St. John's, the charming capital of the British Leeward Islands.

Nelson Springer

THE 9,100-TON CRUISER "PENSACOLA" IN THE GAILLARD CUT: This Cut lies in the southern, or Pacific, portion of the Canal. It is just to the north of the even more celebrated Culebra Cut

PANAMA'S BRIDGE of WATER

The Great Artificial Link which Separates North and South America, but which Connects Atlantic and Pacific

THE idea of a navigable channel across the isthmus is as old almost as the discovery of the Western Hemisphere itself. Nevertheless, it was left to M. de Lesseps to make the first serious attempt, and the world is acquainted with the terrible failure of the enterprise. The French were beaten by the climatic conditions, while they had also underestimated the colossal character of the undertaking. After twelve years of work upon the isthmus, during which period they had excavated about 85,000,000 cubic yards of material, they were glad to sell out to the American Government for a sum of £8,000,000.

The waterway is a locked one, which makes the channel what is nothing more than a water-bridge, the first in the world's history. Entering at the Atlantic end, vessels steam through the partially excavated and dredged channel for a distance of about 7 miles, when they are confronted by a series of double locks, in three flights, one set for ascending and the other for descending vessels, each lock being 1,000 ft. long and 110 ft. wide. These form the elevators by which vessels are raised from the level of the ocean into the artificially formed lake in the centre of the isthmus, known as Gatun Lake, whose surface lies 87 ft. higher than that of the ocean.

This great sheet of water, over 160 square miles in area, has been created by impounding the waters of the Chagres River, by the erection of the Gatun Dam, a huge earthen structure a mile and a half long, over half a mile wide, and 180 ft. high. After proceeding through this lake for a distance of 24 miles, the vessel enters the Culebra Cut, nine miles long, a channel laboriously excavated through a mountain range, when the Pedro Miguel lock is reached. This lowers the vessel into a smaller lake, at the end of which are the Miraflores locks, which drop the vessel down to the ocean level at the entrance to the Pacific. From deep water in the Atlantic to deep water in the Pacific the waterway has a total length of about 50 miles, the actual length from shore to shore being about 40 miles.

AT CERTAIN POINTS ALONG THE PANAMA CANAL THE NEWEST VESSELS OF THE U.S. FLEET CAN ONLY JUST SCRAPE THROUGH WITH A FOOT OR SO TO SPARE ON EACH SIDE—*Drawing by W. MacDowell*

The narrowest part of the Canal is at the famous Gatun Locks where the width is only 110 ft. The largest U.S. battleships (of the Iowa class of 45,000 tons each) have a beam of 108 ft. As indicated on the left in the above drawing this is the maximum at present possible for the successful navigation of the Canal. It is worthy of note in this connection that, although the Iowa class exceeds the North Carolina class by 10,000 tons, the beam is the same! On the right the aircraft-carrier *Lexington*, of 33,000 tons, is indicated in the second of the two locks at Gatun: this vessel has a beam of 106 ft. All vessels are towed through the locks by electric "mules," and six of these would be used in the case of the largest ships. Plans are now afoot to widen the Canal at this point

AN AERIAL VIEW OF THE GATUN LOCKS AND A SECTION OF THE FAMOUS CANAL: The whole Canal zone has long been on a full war footing. This territory is, of course, administered by the United States Government, who have many thousands of men under arms within the region. Both entrances to the Canal have been mined, and heavy artillery—including 14-in. guns—have been mounted on the Atlantic side. Aerial patrols are constant

The locks are the most impressive feature of the canal. There are six at each end of the waterway, in pairs of three. They are among the largest concrete structures of their kind, 5,000,000 cubic yards of this material being requisitioned in their construction. The walls vary from 40 to 60 ft. in thickness. The gates which close these locks are 7 ft. thick, 65 ft. high, and weigh from 350 to 730 tons apiece.

The waterway was opened in 1914, but, because of landslides in the Culebra Cut, it was closed from time to time, and was not in regular use until 1916.

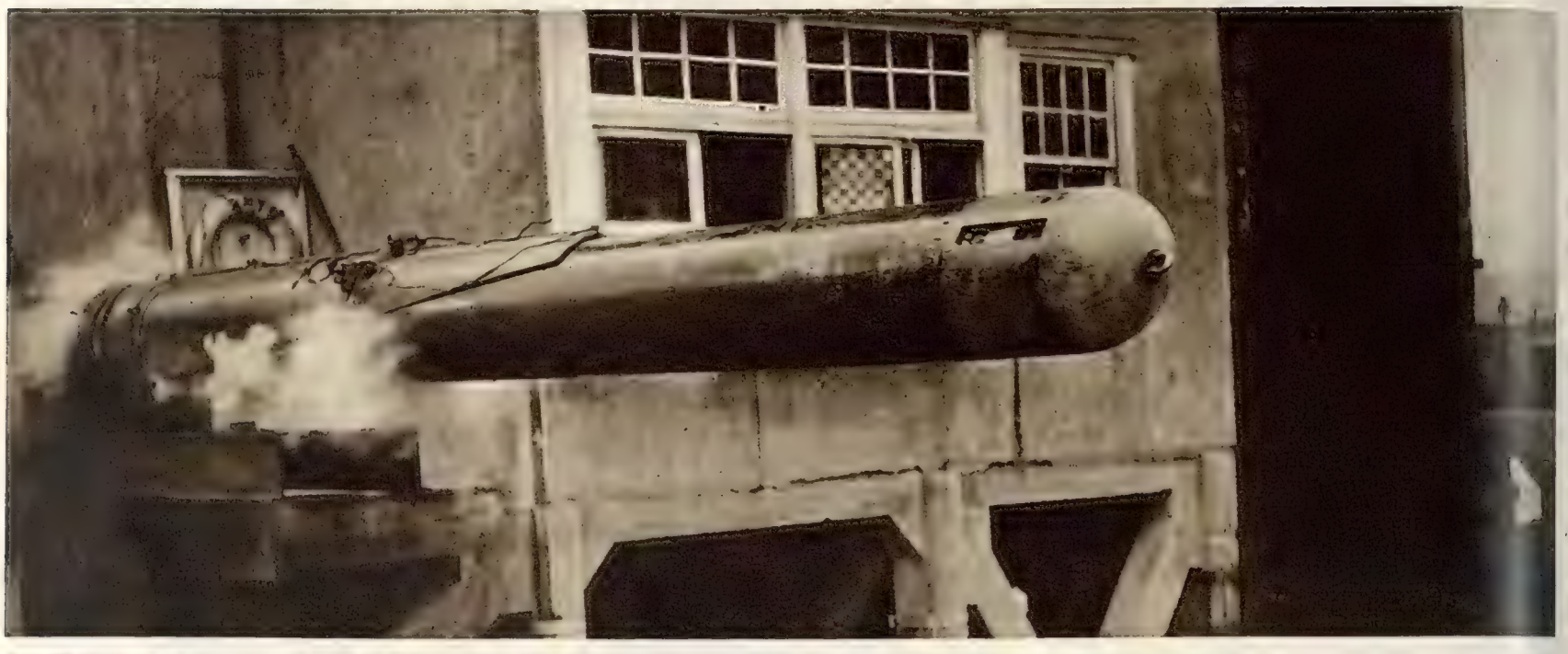
The bare construction cost of the waterway was about £75,000,000, to which sum another £15,000,000 had to be added for the cost of necessary breakwaters, wharves, docks and fortifications. By the end of 1937, America had spent £120,000,000 upon the canal, including some £9,000,000 on fortifications.

In the first twenty years of operation, 80,900 vessels, of which 21,900 were British, passed through the waterway. On an average, just over 5,000 vessels, representing some 25,000,000 tons, use the canal every year. The average time of transit is about eight hours, although liners can make the passage in six.

The saving in nautical miles between San Francisco and New York is 7,873; and between San Francisco and Liverpool, 5,666; the reductions between Liverpool and various ports are, in miles: Honolulu, 4,403; Guayaquil (Ecuador), 5,198; and Valparaiso (Chile), 1,540.

H. J. Shepstone

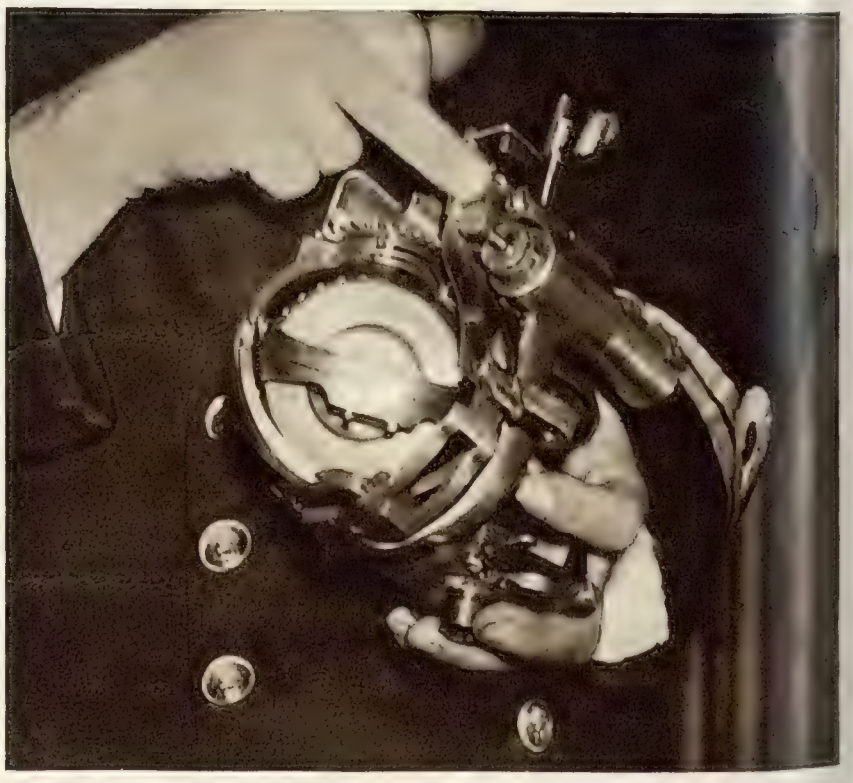
THE TORPEDO, A WEAPON WHICH HAS HAD GREAT SUCCESS IN THE PRESENT WAR



THE ACTUAL TRACK OF A TORPEDO AS IT LEAVES THE TUBE: The track of a torpedo can always be followed by the bubbles of the exhaust which rise from the end of the propeller shaft, which is specially hollowed out for their passage. Efforts have been made to eliminate this surface wake but without success

A BRITISH TORPEDO UNDERGOES ITS TESTS: A heavy type being fired on the "range." It will later be fitted with a war-head: In the Navy three sizes of torpedo are used—14-in. by the smaller naval vessels; 18-in.; and 21-in. The weight of the latter is nearly 1½ tons and its length 22 ft. In the last war the efficient range of a torpedo was some 7,000 to 10,000 yards, and it would require about four or five minutes to cover this distance

AFTER HAVING BEEN TESTED, FINAL ADJUSTMENTS ARE MADE IN THE ASSEMBLY SHOP BEFORE THE WAR-HEADS ARE FITTED: Before despatch for service with the Navy the torpedo is first tested: any final adjustments are then made, and it is fitted with a war-head. The charge and the firing gear are contained within this head, most of the remainder of the missile being taken up with the complicated mechanism necessary for its propulsion and direction

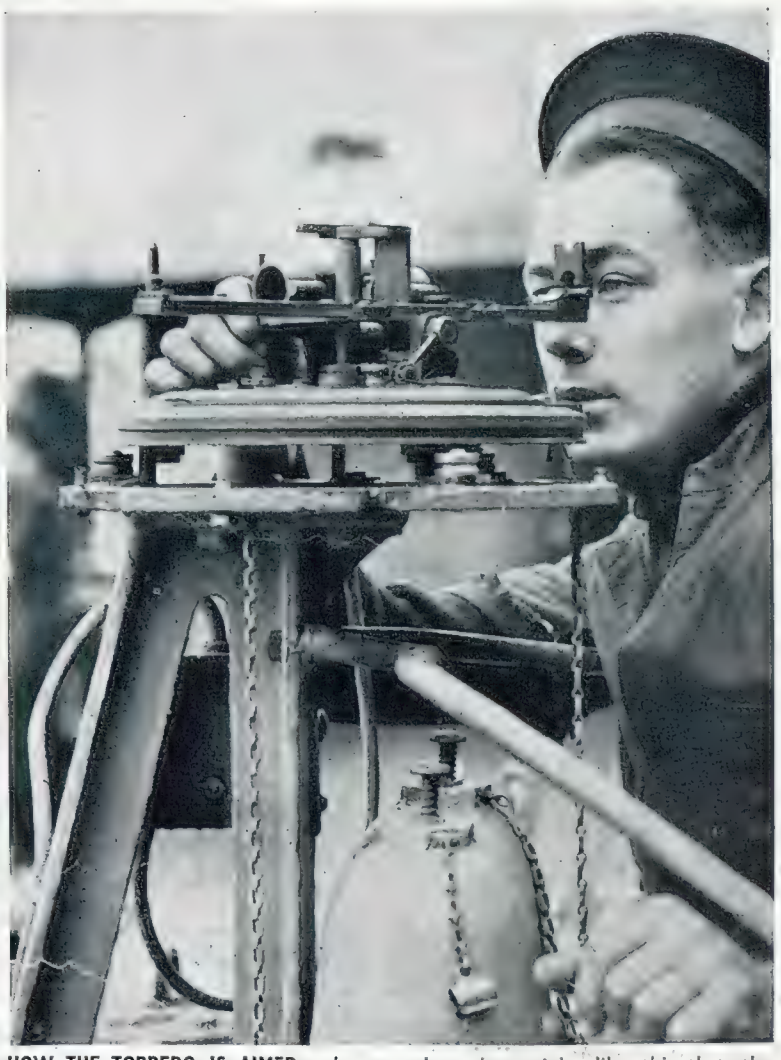


THE WONDERFUL GYROSCOPE IN THE TAIL OF THE TORPEDO: To maintain the torpedo on its true course, a gyroscope is fitted towards the rear behind the "engine-room." Any deflection from the course is immediately corrected by this means. Propulsion through the water is by two engines driven by compressed air: each drives propellers which revolve in opposite directions

A BRITISH CRUISER DISCHARGES A TORPEDO—H.M.S. "Dorsetshire," the cruiser which finished off the "Bismarck." Her tubes are carried on deck and the torpedoes can be fired from the bridge or conning-tower electrically, or by hand—*Drawing by Montague Dawson*

The submerged torpedo-tubes of a battleship are like those of a submarine; apart from the gyro-angling gear the only way to aim them is with the head of the ship, but with cruisers, destroyers and other fast types it is necessary to run the risk of having a torpedo detonated by a stray shell and carry the tubes on deck, training on a pivot like a gun-turret. Both the tube and its crew are exposed, but that cannot be avoided if there is to be a good chance of hitting with snap-shots. The tubes can be sighted, trained and fired either by hand from a seat on top of them or electrically from the bridge or conning-tower, according to circumstances and range. The torpedo itself is a wonderful instrument into which are packed a host of engineering "gadgets." After the short "head" and explosive chamber comes the compressed-air reservoir—which takes up a considerable space: behind this are the two engines which are driven by the compressed air, the gyroscope, propeller shaft and tail. The torpedo, after its launching from the tube, is self-propelling: it travels comparatively slowly, but it is undoubtedly the most efficient method of attacking large vessels, as its explosive effect is so colossal. The Royal Navy have always made great use of this weapon: and in the present war it has achieved many striking successes

GIANT TRIPLE TORPEDO-TUBES SWING OUTBOARD FOR ACTION: A picture from the Mediterranean, where the Royal Navy have been using torpedoes with great effect. Many Italian war-vessels and supply ships have recently been sunk by this means



HOW THE TORPEDO IS AIMED: It was through a sight like this that the torpedo which sent the *Bismarck* crashing to her doom was aimed. As the torpedo leaves the tube a tripper is pulled over automatically and this starts the engines contained within the huge missile. On a cruiser or destroyer the tubes can be trained on their target like a gun; in a battleship, however, the tubes are submerged and can only be trained by aiming the whole ship

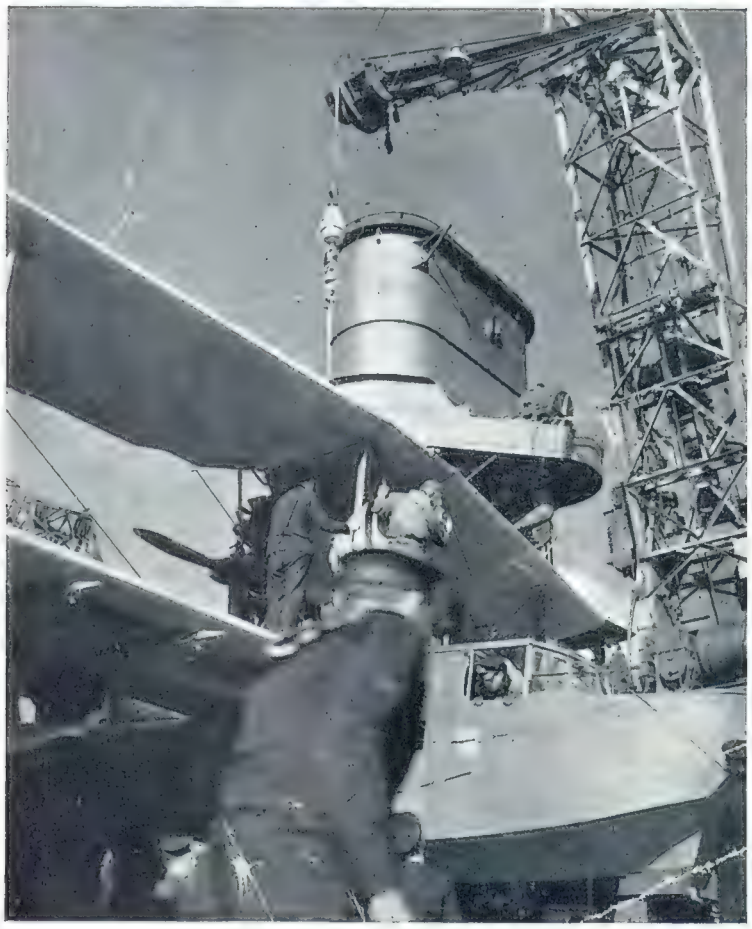
THE NAVAL CRANE

A Note on an Important Piece of Equipment

The cranes fitted in H.M. ships carrying seaplanes or amphibians, as distinguished from aircraft-carriers, prove extraordinarily useful for many purposes. They are specially designed with steel girders to get the greatest strength with the least weight, and they can tackle very heavy loads. Ships designed to carry aircraft from the first, or thoroughly converted, have their catapults, hangars and cranes more or less amidships, one crane on either side stepped close to the rail which gives them a tremendous reach outboard which is very useful when handling boats in heavy weather and reduces the chance of their being smashed against the ship's side. The cranes can handle the heaviest steam or motor boats now carried. They are electrically operated with very fast-running winches and have to be handled with care; if they are not stopped at the right moment their motors are powerful enough to smash any wire. They are very useful for hoisting out guns which want replacing or relining and will often plumb over the engine-room for hoisting out large items of machinery. To avoid interference with A.-A. fire, they are designed as low as possible in their "standing parts" and generally stow right down close to the deck

THE DECK CRANE ON A CRUISER: A picture taken on H.M.S. *Sheffield*, with a Walrus amphibian aircraft being hoisted on deck. In Southampton class cruisers there are two of these cranes, one on each side of the funnel amidships

THE BIG CRANE ON ONE OF THE NEW BRITISH BATTLESHIPS—*Drawing by W. G. Whitaker*
These specially designed structures can be used for a variety of purposes: not only do they lift aircraft from sea to deck, but they can also be used for hoisting out guns and large items of machinery from the engine-room



ONE OF THE TWO HUGE CRANES ABOARD THE "PRINCE OF WALES": As befits our newest and biggest battleship, the two cranes are of very special design and of great lifting capacity. One of their principal duties is to deal with the four aircraft carried on board. When not in use it is customary for these big erections to lie flat along the deck

ON BOARD THE £3,000,000 AIRCRAFT-CARRIER "ARK ROYAL": Two hinged cranes are fitted at each side of the vessel to deal with the sixty aircraft carried. These cranes are of light construction, but are of considerable strength and lifting capacity. They have primarily been designed for speed of operation—an essential when picking up a big number of aircraft during operations at sea

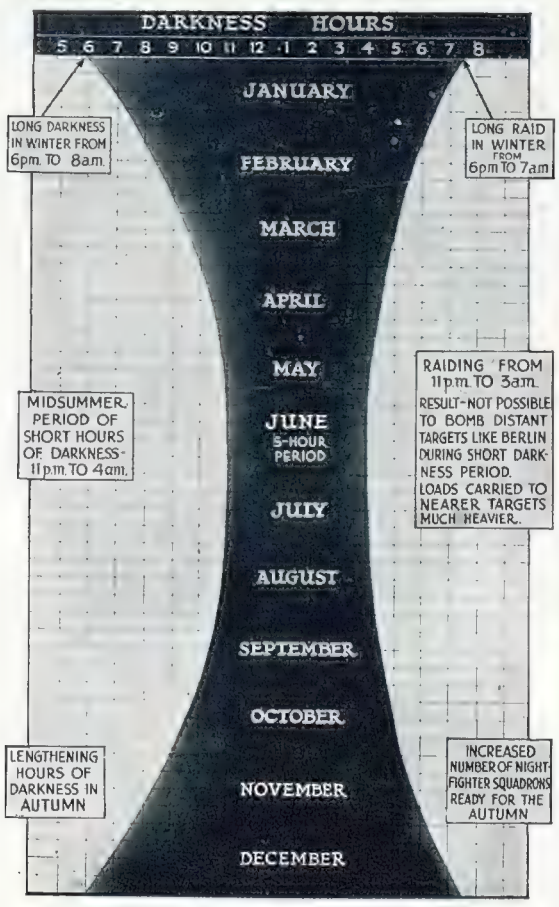
R.A.F. OFFENSIVE BY DAY AND BY NIGHT

Our Growing Strength in Both Fighter and Bomber Aircraft Has Now Made Possible a Twenty-four-hour Programme: The Daylight Sweeps and Night-Bombing Raids Over France and Germany Are Here Pictured by "Sphere" Artists

NIGHT AND DAY: AND THE TWO AREAS WHICH ARE INVOLVED IN THE TWENTY-FOUR-HOUR OFFENSIVE BY THE R.A.F.—Daylight sweeps over Northern France and still heavier night attacks over Western Germany and the Ruhr—*Drawing by E. G. Lambert*

From the Belgian border, down to Abbeville, Brest and beyond is the area "swept" by our fighter pilots during their daylight offensive against that section of Northern France which houses Göring's bombing squadrons, as well as industrial plants forced to work for Germany's war machines. The fighters sweep the skies clear of opposing aircraft whilst the escorted bombers go in to carry out their deadly precision attacks on an area tight-packed with valuable targets.

Then, at night—despite the shortness of the darkness hours—other aircraft take up the attack: this time the targets are found in the Ruhr, tight-packed hive of wartime industry, and in Western Germany, with its harbours and shipbuilding works and aircraft factories. So heavy is the weight of our attack that experts expect that enemy aircraft will soon have to be brought back from the Russian front to stem the onslaught. Meanwhile—especially in the daylight sweeps—the aerodromes used for bombing operations against this country are steadily being pushed farther and farther back



***On left*—"BOMBER'S CHART":** During the period of midsummer the hours of darkness are very short—so short, in fact, that it would be futile to attempt to bomb distant cities such as Berlin. To make up for this, however, British bombers can and do now carry much heavier loads to nearer targets: it is for this reason that our present night raids on the Ruhr and Western Germany are so spectacular—and so destructive, with each bomber taking a far greater load of bombs than is possible when very heavy loads of petrol have also to be carried for the longer flights of winter. It is not unlikely that, when the enemy resumes his bombing raids on Britain, our night-fighter squadrons will have increased considerably, both in numbers and in efficiency

***Above*—FIGHTER PILOTS:** Two R.A.F. officers discussing their experiences after their return from a daylight sweep. The man on the left had shot down two enemy planes and the other had shot an Me 109 to pieces in mid-air with his cannon guns

THE R.A.F. CARRIES OUT CEASELESS WARFARE

THE DIFFERENCE BETWEEN NIGHT AND DAY RAIDING, AS INSTANCED BY THE CASE OF BREMEN

Naturally, Bremen is a favourite target for British bombers. It is at the very centre of Germany's industrial system—harbour, shipyard, concentration-point, distribution centre, manufacturing centre. From England to Bremen is 320 miles—640 miles for the round trip, and plenty of time for a lengthy stay over the target if necessary. By day, precision bombing is carried out, despite the heavy anti-aircraft defences. By night, the journey is made without fighter escorts. Owing to the comparative shortness of the trip and consequent lighter load of petrol, a greater number of bombs can be carried. The damage caused to enemy installations in such places as Bremen, Cologne and the rest must be terrific

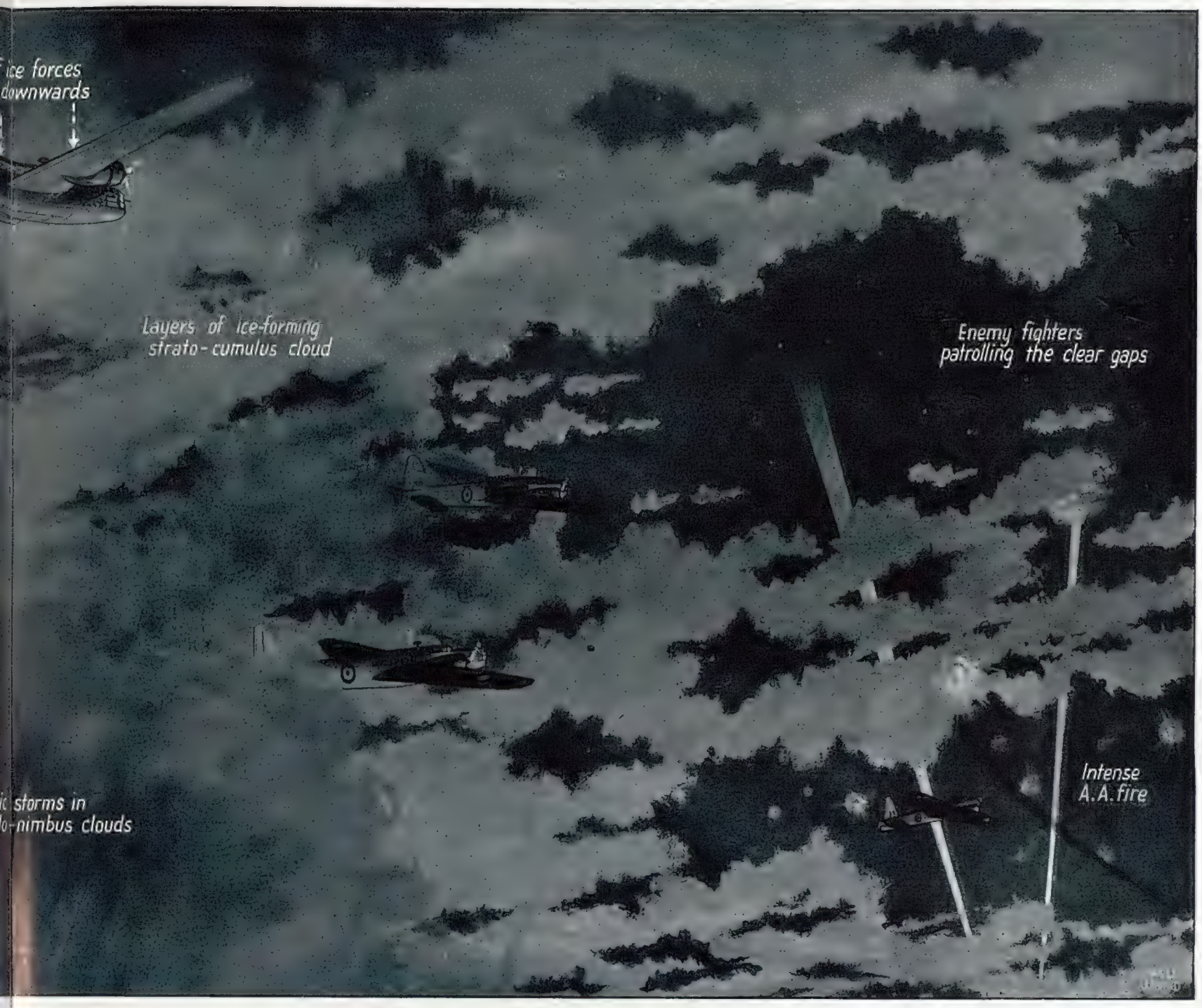
ATTACK AND COUNTER-ATTACK BY NIGHT: The terrific "flak" over a German industrial centre—*Drawing by Roland Davies*

It must not be thought that our air assault on Germany is going unchallenged. Despite their preoccupation with the Russian campaign, the enemy are putting up a very stiff opposition to our bombers, both in anti-aircraft fire and with night-fighters. Especially is this so over naval and industrial centres: and our losses in bombers must be ascribed in part to "flak" and in part to night-fighters—although, up to the present, German success with the latter has nowhere been so pronounced as it was over Britain in April and May last, when our pilots brought down so many of the night-raiders. Bomber crews, in their reports, have emphasised the ferocity of the A.-A. barrage at many points over Germany: and some of our aircraft have suffered damage from bursting shells and from the cannon guns of night-fighters

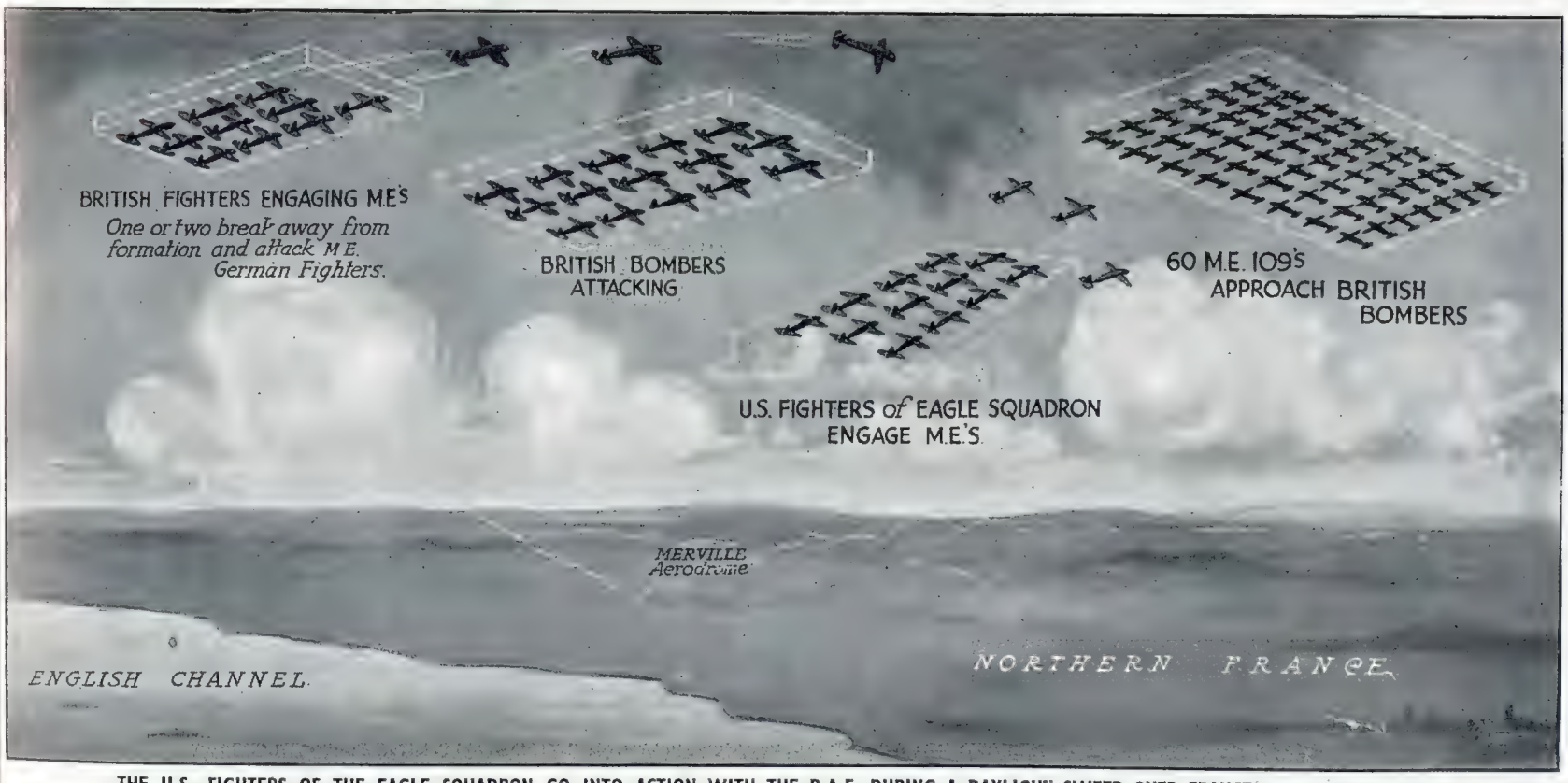
THE HAZARDS OF A BOMBING FLIGHT

In one of our recent attacks on Germany, the loss of twelve of our machines was reported. This can be attributed to the extraordinary weather, which provided the defence with ideal conditions, as depicted in the above drawing. Strato-cumulus clouds were piled in layers up to 18,000 ft. without a break over the North Sea. Thunder and icing made the passage through them yet more difficult. One aircraft was borne down by ice and went into a spin, coming out only when it had dropped many thousands of feet. Towards Bremen the clouds began to part and there were long stretches of clear sky where everything could be plainly seen. In these clearings enemy fighters were concentrated as though guarding breaches in a fortification. Ground defences were equally active, and our crews reported a very fierce barrage from all round Bremen, whilst enemy fighters made frequent patrols.

On left—**AMONGST THE WORLD'S FINEST FIGHTER AIRCRAFT: A formation of Spitfires on patrol:** Since the very outbreak of the war the Spitfire has figured in almost every air battle over Britain and Northern France. The latest version is capable of a speed undreamt-of a few years ago: its manœuvrability and ease of handling make it one of the world's finest aircraft. The Spitfire is now also operating as a night-fighter



OVER GERMANY: Severe weather, with electric storms and ice-forming conditions, hampered recent bombing operations over Bremen: added to which anti-aircraft fire and enemy night-fighters were also active!—*Drawing by L. Ashwell Wood*



THE U.S. FIGHTERS OF THE EAGLE SQUADRON GO INTO ACTION WITH THE R.A.F. DURING A DAYLIGHT SWEEP OVER FRANCE—*Drawing by W. Brownlee*

Not only does this diagram show how British daylight attacks are carried out over Northern France; it also records the entry into the war of the American Eagle Squadron, which is now flying on operational duties with the R.A.F. The fighters were escorting bombers to a target fifty miles inland; and the action began when the British bomber formation had reached its objective and begun the attack. Approximately sixty Me 109's, flying in sections, sought to engage the protecting fighter squadrons. A series of running combats followed which continued until the bombers had completed their missions and had regained the French coast on their homeward journey. Some very good work was put in by the U.S. pilots of the Eagle Squadron, and three enemy aircraft were destroyed by them: two more Me's, though not claimed as destroyed, were severely damaged by the American pilots

R.A.F. OFFENSIVE—AND THE RESULTS

OFF ON A "SWEEP": A squadron of Spitfires heads for France: Residents on the South Coast are now daily watching formations such as the above—British fighters heading out across the Channel to clear the skies of the enemy, and to make the way easier for British bombers

MEMBERS OF A NIGHT-BOMBER SQUADRON: Crews who have just returned from a raid over Germany waiting to be interrogated by the Intelligence officers. This process must be undergone before the crews can disperse for the remainder of the night

LONG-RANGE BOMBERS—THE NOW FAMILIAR "LONG-NOSED" BLENHEIM, still regarded as one of the R.A.F.'s finest bombing and reconnaissance aircraft: This fine aircraft is the Mark IV; it is characterised by its distinctive nose. The range of operation is 1,900 miles, owing to additional tanks in the wings: its maximum speed at operational height and with full load is now 295 m.p.h. Many Blenheims, specially equipped, are used as twin-engined fighters

WHAT THE R.A.F. ARE DOING IN NORTHERN FRANCE: This official Air Ministry picture was taken during the course of a daylight attack on the power-station at Pont-à-Vendin and on the factories at La Bassée. During the course of this "sweep" R.A.F. bombers scored direct hits on the engineering works and power-station at these points. In the picture a bomb is actually seen exploding on the generating-station of the power-plant at the first-named spot

BOMBING OUT THE "LUFTWAFFE": Nine bombs are here seen bursting on the concrete runway at the St. Omer-Longuenesse Aerodrome during an R.A.F. daylight sweep

WRECKED SHIPPING IN A DUTCH PORT: Every important enemy-occupied port is now receiving its nightly quota of heavy bombs from the R.A.F. This picture, which comes via America, shows a wrecked ship heeling well over into the water in a Dutch port after a raid

FIGHTING FIRE IN THE AIR

Notes by D. Cowie: Drawings by Roland Davies

WHEN a full analysis is issued after the war of casualties among our airmen, it will probably be found that not only are the figures lower than was expected before the war, but surprisingly few were caused by that most dreaded enemy of all—fire. This will have been due to the safeguarding effect of one of the most remarkable fire-extinguishing devices ever invented.

Much publicity has been given to two other prominent life-savers, the parachute and the rubber dinghy. Yet the Graviner Fire-Fighting System, now used in all aircraft of the Royal Air Force, has possibly been responsible for averting just as many tragedies.

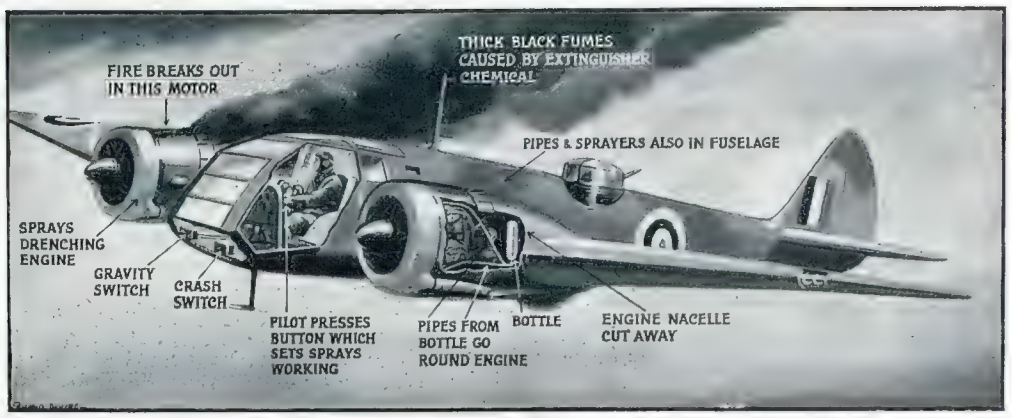
The fire danger to aircraft becomes most serious when there is a crash. Either the machine turns turtle, and the white-hot engines are sprayed with deadly petrol, or it comes to a sudden and shattering stop, so that the fuel-tanks, carried forward by the great momentum and meeting inertia, burst instantly. Now the Graviner extinguisher is actually devised in such a way that it automatically begins to operate immediately the aircraft crashes, no matter the method of impact.

How is all this done? Three factors are mainly responsible, the wonderful chemical employed, and two extraordinary automatic switches.

The action of methyl bromide on aircraft fires is twofold. First, when squirted in the form of fine jets on to hot metal parts, it instantly causes such a lowering of their temperature that petrol and oil will not ignite on them subsequently. Second, when squirted similarly into raging petrol or oil flames, it sets up dense black fumes at once, and the fire dies out in their grip. Moreover, the fluid does not take up much space, and a few ounces will do the necessary work.

So the ideal extinguishing medium was discovered. Then the inventors got to work on those extraordinary switches.

One of them is called the "inertia or crash-operated switch." It is mounted forward at the bottom of the fuselage, and, at the moment of impact of the aircraft with the ground, automatically sets all the extinguishers working. This is done by a small steel pendulum, which on its under-face is hollowed out to form a crater, in which a pin mounted at the end of an arm engages. The design is such that the pendulum crater enables the pendulum to remain seated on the pin under conditions of vibration. But any sudden impact reaching a certain predetermined degree of "deceleration," or pulling backward, releases the arm, causing a spring-controlled spindle to close the contacts and operate the extinguisher.



WHEN AN AIRCRAFT CATCHES FIRE IN MID-AIR: The complete system whereby the flames are checked before they take hold. A too-sudden rise of temperature and the flame switch automatically comes into operation

The other "wonderful box" is called the "gravity switch," and is for accidents where the aircraft turns completely over. The extremely clever feature of this device, however, is that it is connected with the mechanism for operating the retractable undercarriage. Therefore, it will not work while the undercarriage is up, so that there is no fear of the extinguishers starting when the pilot decides to indulge in a few aerobatics. But when he sees a crash coming, the pilot starts the undercarriage mechanism, and the "gravity switch" also prepares to operate if necessary.

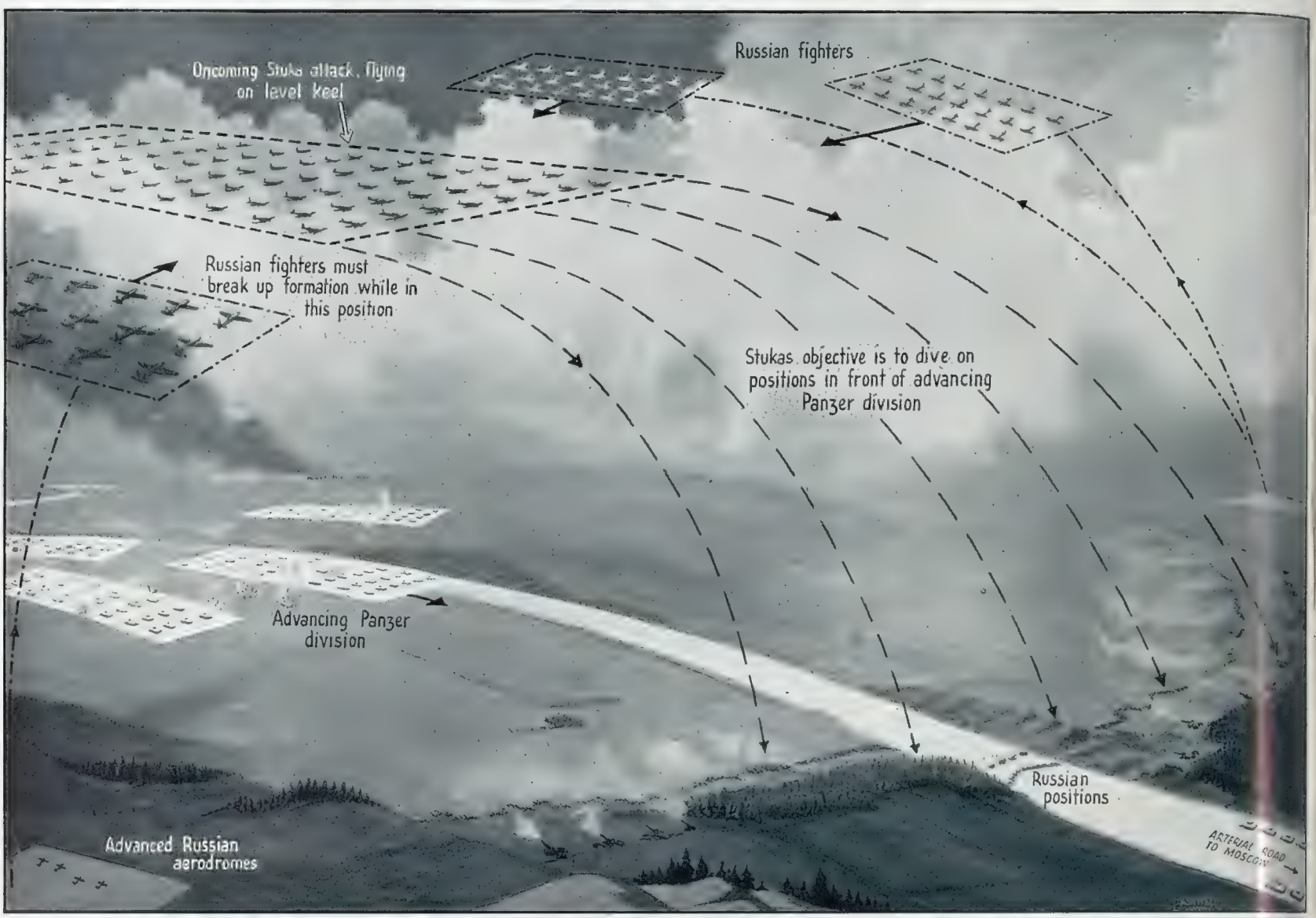
There are many other interesting features of this system, but I only have space to describe one more. That is the extinguisher bottle itself. We have all seen the kind of fire-extinguishers made for motorists. The Graviner bottles are similar in appearance, but fundamentally very different, in that the head contains a fuse which, when ignited by any type of electric battery, effects an immediate opening of the discharge head, permitting the bottle to empty itself in a few seconds. Apart from the automatic fire and crash controls of the whole extinguisher system, it can also be operated by the pilot, through an electrical switch on his dashboard, while members of the crew can use the separate bottles manually if the occasion arises.

WHEN A PLANE TURNS OVER: The great menace of fire under such conditions (which almost always resulted in the death of pilot and crew trapped in the aircraft) is now obviated by the gravity-operated switch shown here

HOW THE CRASH-OPERATED SWITCH WORKS: Only when the undercarriage is down—that is, at the take-off or the landing—does this switch come into play: otherwise it remains inoperative. Should a crash occur at those vital moments, the fire-extinguishers immediately begin to act

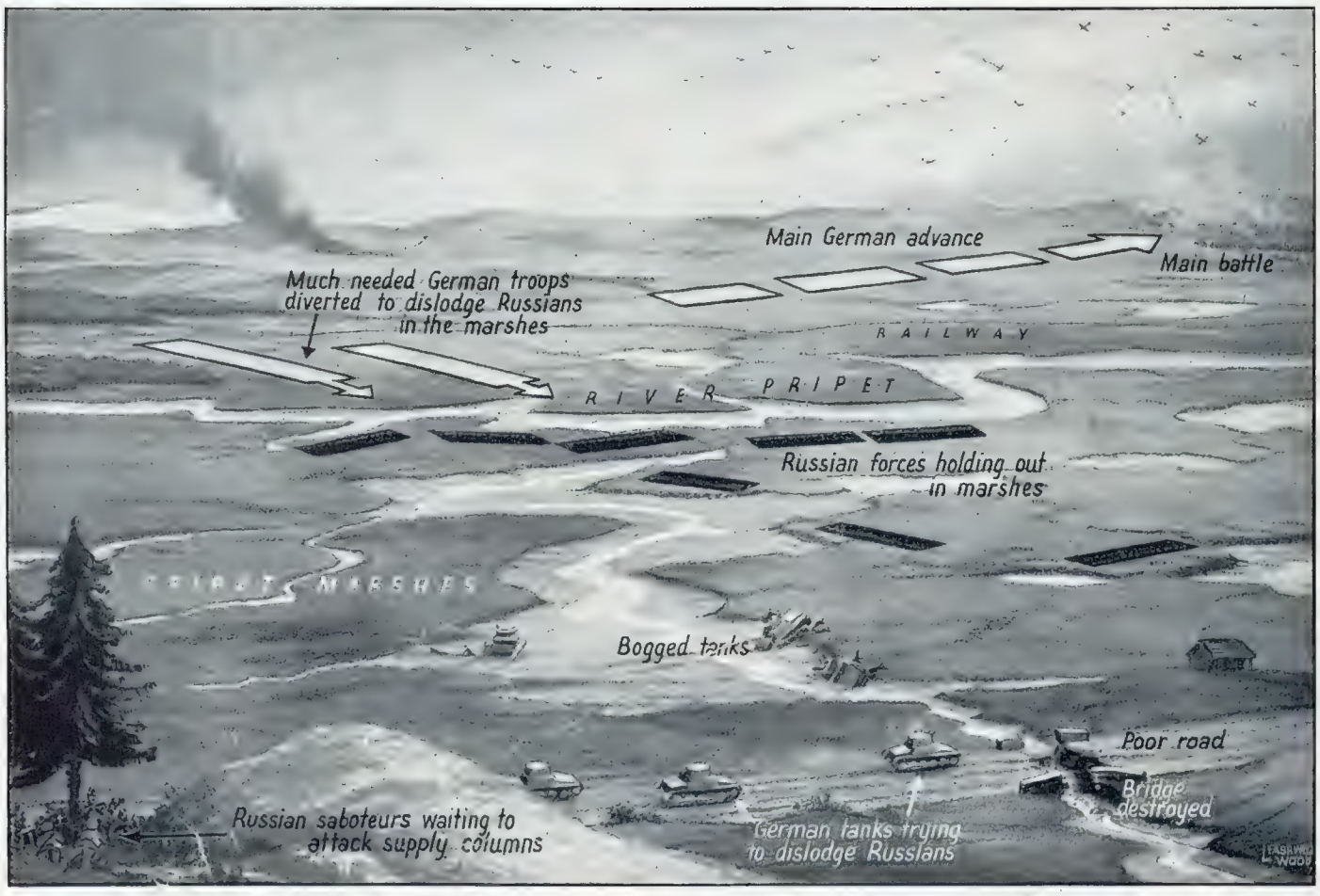
WITHIN THE INTERIOR OF THE AIRCRAFT: Should a fire suddenly arise owing to anti-aircraft fire or incendiary bullets within the aircraft itself, there are hand-operated extinguishers for the crew to cope with the outbreak. These have already proved their value in bombing operations over Germany

THE TITANIC STRUGGLE IN WESTERN RUSSIA: *Special "Sphere" Diagrams*



THE GERMAN METHOD OF ATTACK AS IT HAS BEEN CARRIED OUT AGAINST THE RUSSIANS: The onslaught by Stuka dive-bombers on the Russian positions, to blast a way through for the German Panzer Divisions—*Drawing by L. Ashwell Wood*

The familiar technique has been followed by the Germans in their Russian campaign, as in the campaigns in France and Greece which preceded it. The main fighting and the main advances have been carried out by the Panzer Divisions, supported as before by Stuka dive-bombers and other aircraft—but this time on a far greater scale than hitherto. Taken off guard by the suddenness of the attack and by its terrific weight, it was inevitable that the Russian armies should be forced to give ground. Then followed the rapid forward movement of the vast German Army. It was not long, however, before the fury of the first blows became spent: and then the Russians—with heavy reinforcements in both men and machinery—went in to the counter-attack. Unlike France and Greece, the Russians have a considerable Air Force, and this they used to good advantage to break up the mechanised assault at many points. As is now known, the Stuka dive-bomber and the Panzer Divisions work in concert: the dive-bomber blasting a way through the defences, so that the tanks can enter the breach thus caused and take the defenders' positions from the rear. The Russian Air Force, however, have been taking a hand in this game—their fighter aircraft have been busy amongst the Stukas: and it is claimed that many hundreds of German aircraft have already been destroyed, to say nothing of the tanks. The picture reproduced above is a diagrammatic exposition of the attack and defence as it has developed in the Russian campaign.



THE GRAVEYARD OF HUNDREDS OF GERMAN TANKS: The Pripet Marshes, where Russian forces held out even after the enemy had advanced ahead of this region—*Drawing by L. Ashwell Wood*

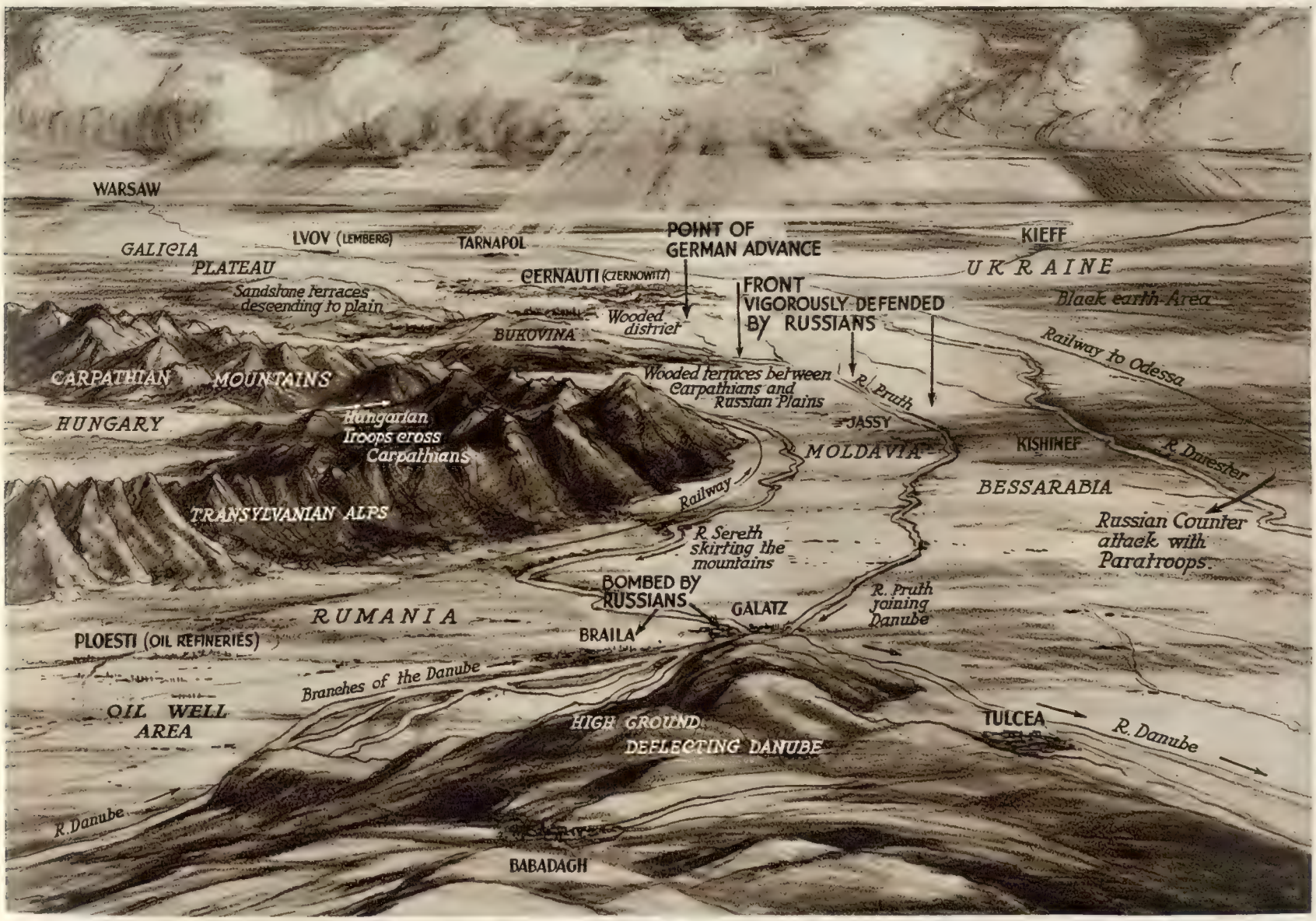
The Pripet Marshes have always proved a formidable barrier to an army advancing from the west. Although the main German forces swept to north and to south of this area, nevertheless a large number of tanks were trapped here. In their attempt to take Minsk from the rear, and to destroy the considerable Russian forces with their backs to the Marshes, the Germans attempted to drive their tanks into this danger zone. But the Russians fought back, even whilst the main tide of battle swept onwards: in the result hundreds of tanks were bogged and immobilised

The drawing on the left is a portrayal of the nature of the struggle in the deadly Pripet Marsh area. Here a large Russian force was cut off by the Germans; but its destruction, though claimed by the enemy, was not so easy. Held up by the difficult terrain, with many scores of tanks bogged, and faced with an indomitable defence by tough Soviet soldiery, the Pripet Marshes may yet prove a sad trap for the hitherto all-conquering Germans

THE MEN WHO ARE IN CONTROL OF RUSSIAN AFFAIRS: This picture, just received from Moscow, was taken during a meeting at the Kremlin when Stalin addressed Commanders of the Red Army. It shows the following leaders of Russian affairs: (from left to right) Marshal Voroshilov (one of the five members of the State Committee of Defence); N. A. Voznesensky, a vice-chairman of the Council of Commissars; M. I. Kalinn, Chairman of the Presidium of the Supreme Council; N. M. Shvernik, Chairman of the Council of Nationalities; V. A. Malyshev, a vice-chairman of the Council of Commissars; Marshal Timoshenko, Commander-in-Chief of the Red Army; V. M. Molotov, Chairman of the Council of Commissars and Commissar for Foreign Affairs; G. M. Dimitrov, famous for his part in the trial in Berlin after the burning of the Reichstag; L. Z. Mekhlis; and four important Army Commanders—G. K. Zhukov, K. A. Meretskov, S. M. Budenny, and G. I. Kulik

ON THE FRONTIER BETWEEN GERMANY AND RUSSIA: As long ago as last November Russia was obviously beginning to become perturbed at her relationships with Germany, despite that she had signed a pact with that country—or, possibly, because of it! This picture was taken in that month. It shows Marshal Budenny (in centre, with heavy moustache) and a group of his Commanders inspecting Russian defences on the south-west frontier

THE FIVE MEN WHO COMPRISE RUSSIA'S NEW WAR EMERGENCY COUNCIL: This Council was instituted within a few days of Germany's declaration of war, with Stalin at its head. It comprises the following (seen from left to right above): M. Molotov (Vice-chairman); Stalin; Marshal Voroshilov (former Commissar for Defence); M. Malenkov (of the Supreme Soviet); and Ladrenti Beria (Commissar of Home Affairs and Chief of the Ogpu)



AT THE EXTREME LEFT OF THE LONG RUSSIAN LINE: THE SOUTHERN AREA WHERE THE RUSSIAN DEFENCE LINE FOLLOWED THE PRUTH RIVER, and where the Hungarians crossed the Carpathians to join in the fray—*Drawing by Percy Home*

Although the vast proportion of the battle area is a flat, almost dead-level plain, there is one section where mountains and hills make their presence felt. This is in the southernmost sector, where the snow-capped Carpathians stretch from western Hungary to Moldavia. To the north of this mountain rampart lies the terraced plateau of Galicia. The northernmost ripples of this disturbance reach up towards Lvov (Lemberg), Tarnopol and Cernauti (Czernowitz). Here, in this last-named district, the Pruth and the Dniester converge among wooded hills. This terrain has given a different complexion to the fighting around these rivers and it is here that the Germans appear to have effected a sustained crossing of these natural barriers. A little further south lies Bukovina, also a hilly district. It is here that the Hungarians—hungry for more territorial acquisitions—have crossed the Carpathians and joined in the fray with the German divisions already in the Pruth district. The Russians have, however, been hotly contesting the German pressure. Once beyond the Pruth, the great Black Earth area of the Ukraine is encountered and here rivers are the only natural obstacles. In the foreground of the view is shown the junction-point of the Sereth and Pruth with the Danube, which is deflected northwards at Braila and Galatz by a triangle of high ground. Both these cities have been bombed by the Russians—as, indeed, have many other important places in this area, which is so important to the German war-effort

KIEV, ONE OF THE MOST BEAUTIFUL CITIES OF EUROPE, towards which the Nazi forces are driving in their present campaign against the Russians—*Drawing by Sydney R. Jones*

Lying on the right bank of the Dnieper at its junction with the River Desna, Kiev is one of the oldest cities of Russia and the birthplace of its Christianity. It is said to have been founded in the fifth century A.D. and has been described as the "Holiest of Russian cities," "the most beautiful city in Europe," and "the home of Christianity." It stands on the high bluffs overlooking the river and with fine views of the densely-wooded surrounding country. Kiev has a population of over half a million and is the third largest city in the Soviet Union, being outranked only by Moscow and Leningrad. In the drawing above the big building in the left foreground is the Cathedral of St. Sophia, which was built in 1037-1049 and which is surmounted by fifteen gilded domes

THE HOLIEST OF OLD RUSSIAN CITIES

And the Capital of the Ukraine. *A Description of* KIEV

by MERIEL KNOWLING

ON June 22, 1812, Napoleon, breaking off negotiations with the Emperor Alexander at Dantzig, declared war on Russia, his armies crossing the Niemen on June 24. On June 22, 1941, Hitler began his attack on Russia without any formal declaration of war, but his Panzer divisions, his gargantuan tanks, his dive-bombers, his roaring 'planes, move more swiftly than the "Grande Armée," which had to fight its way foot by foot over the almost impassable Russian roads. Napoleon only reached Moscow after he had fought the Battle of Borodin on September 7. Hitler is attacking on a 1,500-mile front, and it is chiefly perhaps on the Ukraine that his greedy eyes are fixed, for here in this land of rich, black soil, of grain and wheat and flowering orchards, lie the fruits of the earth, which are vital to him.

The word "Ukraine" means "border," "frontier," or "beyond," and here, through all the centuries, fierce battles have already been fought against Tartars, Mongols, Lithuanians, Poles and Germans, and here on the hill above the yellow Dnieper, and the miles of spreading cornfields, stands Kiev, the old capital of Russia, "Mother of Russian Cities."

Here St. Andrew first preached Christianity to pagan Russia, and here, so the legends say, the first city was built by Ky and his two brothers in the year 430 A.D. In 879, Rurik, the Varangian, or Swedish Sea Rover, who had been made Prince of Novgorod, died, leaving his little son, Igor, to the guardianship of his kinsman, Oleg. And Oleg, hearing of the fame of the city of Kiev, which had been taken by two other Varangian chieftains, Askold and Dir, sailed down the Dnieper and lured them aboard his ship. Askold and Dir were killed without mercy, and the gates of Kiev were opened to the first Prince of the House of Rurik, and in the dim shadows of that vast barbaric land dawned the first light of a great Empire.

THE BATHING-PLACE ON THE BANKS OF THE DNIEPER, where thousands of the inhabitants of Kiev bathe during the summer months, sun themselves and watch the passenger and freight steamers passing up and down the river

It was not, however, till the reign of Vladimir, called by his people "The Little Red Son of Russia," that Kiev became famous, for Vladimir fought and overcame the Greeks at Chereson, married the daughter of the Emperor of Byzantium, was baptised in the Orthodox faith in 988, and returned to Kiev, bringing back Greek priests, gold and rich treasures, dreaming of making his city as beautiful as Constantinople.

Under his son, Jaroslav the Wise, the Mother of Russian Cities reached the zenith of her glory. Jaroslav reigned for thirty-eight years, and it was he who surrounded Kiev with white walls, with golden gates, and turrets and domes that shone across the wide plains. It was he also who built the Cathedral of Saint Sophia, and framed the first laws of the country, called "Russkaya Pravda." He founded cities and schools in the Ukraine, paid students to translate the old Greek writings into the Slavonic language, and concluded treaties with the Sovereigns of Europe.

In the thirteenth century the name of a people, hitherto unknown, sprang into dire significance, and, driving everything before them, the terrible Tartar hordes swept across the Russian plains, overwhelming and invincible in their numbers, mowing and slaughtering and plundering as they came. In the year 1240, Batu, the great Tartar chief, looking out from the smoking ruins of Chernigoff, saw the white walls and golden domes of Kiev shining in the distance, and, waiting till the Dnieper was frozen, he moved across the solid ice with hosts of wild, yellow-faced horsemen, camels and waggons, leaving the once beautiful city nothing but a heap of stones and the bodies of the dead, with just one wall of the Cathedral of Saint Sophia, with the image of the Virgin standing up amidst the ruins.

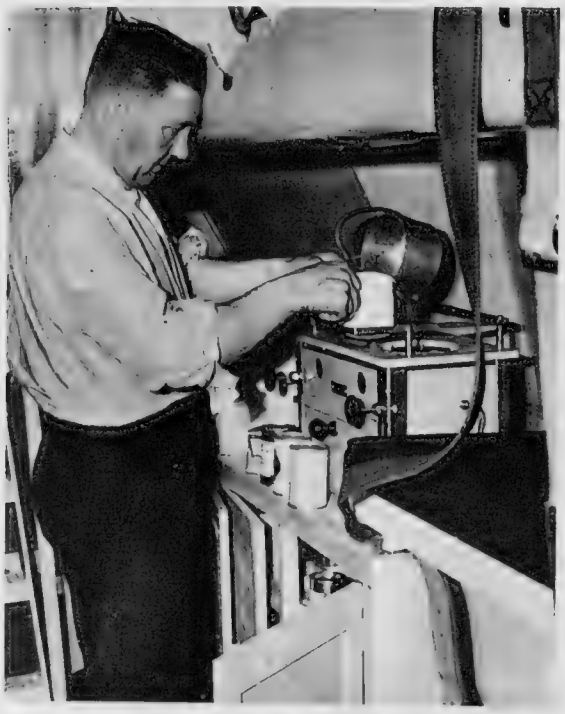
Many years later, in 1771 and 1793 came the two treaties in which Frederick of Russia and the Empress Catherine partitioned the old Kingdom of Poland between them, Lithuania and the Ukraine being ceded to Russia, and Catherine travelling in triumph with all her Court down the yellow Dnieper.

Once more Kiev became the "Mother of Russian Cities," always more loved by the people than Moscow or St. Petersburg. Thousands of pilgrims, from all over Russia, flocking there every year to burn candles before the Virgin on the Indestructible Wall, and to pray in the Lavra, or Monastery of the Caves, founded by the monk, Hilarion, in the eleventh century.

Here one seemed to be in the heart of old Russia, full of legend and romance, of brutal cruelty, and gentle unquestioning faith. Here were the ghosts of long dead Princes whose names still lived in the people's hearts.

The NEW FLOATING RESCUE STATIONS of the R.A.F.

First Official Pictures of the Stations to be Moored in the Channel



THE MAROONED AIRMAN COOKS HIMSELF A MEAL: Note the toothbrush, soap and towel in the foreground, for a good wash-up after long immersion in sea-water

TURNING ON THE RADIO WHILST WAITING FOR A RESCUE LAUNCH: The cigarette comes from the many supplies with which the Station is equipped

THIS STRANGE-LOOKING CRAFT IS A "RESCUE STATION," HERE SEEN IN "DRY DOCK." Note the rail all round the vessel, and the steps which make it easy for the airman to climb on board

AFTER HE HAS REACHED THE STATION: The airman takes it easy and rests in one of the bunks pending the arrival of the rescue launch. Tins of food and a cooker can be seen in the left foreground

Last autumn most of the battles in the air were fought over British territory. To-day the R.A.F. are waging war over France and on the far side of the Channel; thus, when pilots are forced down, they often find themselves a long way from home. It is now announced that floating Rescue Stations are to be established in the Channel for R.A.F. airmen who may be forced down into the sea. The stations are similar to those used by the Germans on the French coast last autumn: they look like good-sized launches; but ours are built of metal instead of concrete. Each of these "Air-Sea Rescue Floats" is 20 ft. long and made of welded steel plates; each is painted bright yellow and red to make it conspicuous against the background of water, and the sides are prominently marked with a Red Cross. The pilot is able to find shelter within the cabin until picked up. The compact equipment carried on the float has been carefully planned: it includes first-aid appliances, dry clothes, a supply of food, a cooking stove, signals, torches, a wireless receiving set, books and—cigarettes!

AN INCIDENT DURING THE CAMPAIGN IN LIBYA—*Drawing by H. Walker*

During the recent fighting around Sollum in the Western Desert, the Germans were located in considerable force in machine-gun nests at various points: their fire took a toll of the Indians who were opposing them. Stretcher-bearers, regardless of the peril from the snipers, carried the wounded up the eastern slope of Hellfire Gorge and over the ridge into the next wadi. From here ambulances conveyed the wounded to field hospitals pitched in the desert and then on to railhead at Mersa Matruh

The WORK of

In this War Little Attention has Service whose Members Have in the Pursuance of their Duties

"THE ground which has already been won in Syria has involved considerable fighting, and every branch of the Army is entitled to a share in the honours. *Stretcher-bearers take by no means the last place on the list of courageous acts.* They had a particularly sticky job last night when they went out to bring in wounded men who were left on the outskirts of the town in fighting earlier in the day. They were subjected to heavy fire the whole time."

That extract is taken from a recent report by a correspondent with General Sir Henry Maitland Wilson's army. It constituted the last paragraph of that article, but is put first here, and it may be doubted whether any soldier among my readers would disagree with the placing. To the fighting-man himself, there is no greater courage than that of the stretcher-bearer—indeed, of all workers in the Royal Army Medical Corps—because

A DAHABIYEH ON THE NILE AS A NURSES' HOME: Wounded soldiers and wounded prisoners of war receive equal treatment in the hospitals of Egypt. Many of the soldiers wounded in the early battles in Libya are now well on the way to recovery. At one of the Egyptian hospitals, the sisters and nurses live in this luxurious house-boat on the River Nile, where they spend most of their off-duty time

theirs is the valour of cold blood, the gallantry of the individual who risks his life on the battlefield not to kill, but to save.

The sole duty of the R.A.M.C. is to take care of the wounded and look after the general health of the troops. It is difficult to believe that until recently (in historical terms) there was no such organisation. But the lack was demonstrated clearly in the old days by the fact that invariably more soldiers died from disease than from enemy action, while to be wounded in the field was as good as to be posted lost at once. To-day this Corps is one of the most important in the Army—and to-day it is a very modern organisation indeed.

Until the recent return of mobile warfare, the R.A.M.C. worked efficiently but somewhat rigidly, with casualties passing like clockwork from the trenches to advanced dressing-stations, through casualty-clearing stations and by hospital train to base hospital. All that has altered under the new conditions, however, and so we have incidents like that reported from Libya the other day, when R.A.M.C. men waited patiently with their wounded charges under the lee of a disabled tank in the open desert for the ambulance to arrive. Eventually it did come—an R.A.F. plane, adapted for carrying casualties. Within a few minutes the little party was whisked literally from the jaws of death, and brought smoothly back to distant Cairo.

Doctors comprise the brains and backbone of the R.A.M.C., of course, but admit themselves they would be helpless without the rank and file of stretcher-bearers, orderlies, masseurs, dispensers and the like. These enlisted in the Corps often because of their compassion for the victims of war—many Quakers are among them—but have rarely failed in courage or martial determination. Thus a decoration was awarded early in the Abyssinian campaign to a young orderly of the R.A.M.C., who rushed out from a hospital tent, which was being bombed by the Italians, and fired several shots with a rifle at the aircraft, possibly being responsible for its eventual destruction. His doctrine of non-violence had failed for once, but he had revealed the innate mettle of his type.

Commissions in the R.A.M.C. start at lieutenant, except that the rank of captain is granted to practitioners who held commissions in the last war. Specialists are given the acting rank of major. Rates of pay, exclusive of allowances, are: Lieutenant, £362; captain, £447; major, £621. So it will be seen that many medical men, like others in the Forces, make real sacrifices when they volunteer for this hazardous work. An Anzac back from Egypt told the story of how he had had a fractured

WOUNDED DURING THE FIGHTING IN ABYSSINIA: A wounded British soldier recuperating on the veranda of a hospital established in the Sudan

finger put right there by an R.A.M.C. officer who had formerly been one of the most fashionable obstetricians of Harley Street.

It is the general opinion, however, that what the good R.A.M.C. man wants is not degrees so much as the ability to work well under difficult conditions. Study the tales of doctors' gallantry in the field, and it will be noticed that their bravery mostly consisted in sticking to their job when even their patients had counselled them to take cover. The new mobile war and especially bombing have greatly increased opportunities for almost superhuman bravery of this kind. A broadcast account was given

***Above and on right*—A FRENCHWOMAN AMONGST THE WOUNDED IN SYRIA:** Mlle L. A. Petyt de Mailly is Matron of the Nursing Sisters of the Free French forces in Syria. She is here seen at an advanced dressing station attending a French soldier suffering from a minor wound. This is the second war in which this gallant woman has taken part

This page is missing from the print copy used for digitization.
A replacement will be provided as soon as it becomes available.

This page is missing from the print copy used for digitization.
A replacement will be provided as soon as it becomes available.

FOUR FEROCIOUS-LOOKING NAZI PARACHUTISTS: Here is a complete picture of what these shock troops look like when dressed to kill—literally! The picture was taken in Germany but fell into British hands during recent operations. It shows in full detail the dress worn and the kit carried when going into action. The shaven poll is typical of many German troops when on active service

ENTERTAINING THE NAVY—Miss Evelyn Laye goes into action: This well-known actress is Chairman of the Navy Branch of E.N.S.A. She is here seen entertaining officers and ratings during a leisure moment aboard a depot ship in a British port

ONE WAY OF OBTAINING NEW SHOES WITHOUT COUPONS! These girls not only get their shoes without coupons—they get them for nothing! They are all volunteers for the W.A.A.F., and are here being fitted out at an Air Force station

WHERE THE CHEESES COME FROM: Despite the cheese shortage, one factory alone, in Wensleydale, North Yorkshire, makes over 20 tons of cheese every week—of the famous Wensleydale Cheddar type. The Yorkshire girls who work in the factory are thus responsible for the cheese ration of many thousands of people!

AT A GOVERNMENT TRAINING CENTRE FOR WAR WORKERS: These girls are all in training at the Westminster Technical Institute. Many young girls and women have been trained at this centre for highly skilled jobs in wartime industry

POURING OUT THE SHELLS IN A SUPPLY FACTORY: Women play a very large part in shell-production in Ministry of Supply factories. This automatic turning machine is controlled by a girl, and turns out hundreds of shells weekly

The World of Books—By Vernon Fane

LIFE-STORIES OF THE GREAT

Gilbert and Cecil Chesterton—A Pungent and Vivacious Family Study; The Glamour Boy of Adventure, and the Cash Value of an Elephant Ride

IN his autobiography, G. K. Chesterton told the world very little about his life, but a great deal about himself and about his intellectual activities. It has sometimes been said that no man can write a book, much less a book purporting to be an autobiography, without revealing himself. By those standards G.K.C. failed completely, as possibly he intended to do. A master of paradox, he was well able to work his will with the stuff called autobiography.

THE CHESTERTONS (Chapman and Hall. 12s. 6d.) though not in any sense a biography of G. K. C., nevertheless is the first book published since his death which can in any way be said to be biographical. Mrs. Cecil Chesterton writes, as the title indicates, about the whole family, and her lively and outspoken record is one of family personalia in which Gilbert and Cecil are the predominant characters, with all the essential details of family life filled in.

A TRAVELLING LIBRARY FOR THE PIONEERS: Major P. P. Wheaton, of the Pioneer Corps of Bedfordshire and Buckinghamshire, has just received one of the W.V.S. Travelling Libraries given by the Pilgrim Trust of America. The presentation was made by the W.V.S. Literary Representative of the County, Mrs. Hugh McCorquodale. (Barbara Cartland, the novelist and playwright); she is here seen distributing books after the handing-over of the library

That G. K. Chesterton was a great man and a genius there can be no doubt. His was a profound influence upon the intellectual life and thought of his generation. He attacked accepted beliefs wherever he found them, and did more to upset the philosophical totems and to expose the shams of the mystic-scientists than anybody.

In this country genius comes slowly to recognition if it is too versatile. The British public has ever been suspicious of versatility, and believes in something about a shoemaker sticking to his last. If G. K. Chesterton had been a poet and nothing more, he would have been that much easier to assess, and consequently in that extra amount of danger of being popular. That he was a journalist, philosopher, novelist, political controversialist and a dramatist as well, led the general public to suspect his worth in any one of these spheres.

The public knew him as a convivial character with Falstaffian proportions and predilections. People so liked to think of him as never so happy as when thumping an inn table in front of a foaming tankard and roaring at the world at large, in the company of kindred spirits, that none of them cared where the water went, if it didn't get into the wine. They knew he was a devout Roman Catholic, and they always enjoyed it when he stood his opponents on their heads and shook the truth out of them by a wicked and acute application of paradox.

Mrs. Cecil Chesterton confirms, in a sense, this popular portrait, but reveals some of those frustrations which cramped, cribbed and confined his natural ebullience in his later days. He was happily married and deeply devoted to his wife who, for physical reasons, but also, as the author declares, for reasons of temperament, blanketed his natural exuberances to such an extent that for a long period of his life he was denied the kind of society in which his natural buoyancy and ebullience would have led him. She forced him to live in the respectable dormitory of Beaconsfield, and by tethering him there and by severely rationing his tendencies to open-handed generosity, forced him into a life which must have had an effect upon his spirits and, ultimately, upon his health.

It was natural, declares the author, that he should fall into the habit of indecision and tend to evade the larger issues of life. He fell into an easy way of living, and of an acceptance of the struggles, sacrifices and devotion of those with whom he was associated as something to be taken for granted. He would retire to the inadequately sized study and "those tight ramparts shut off the real world and offered no distraction to the Ballets of his fantasy."

Nevertheless, Mrs. Chesterton fails to convince at least one reader that the man himself did not, in his work and in the vigour of his character, survive these disabilities.

On the subject of her husband, Cecil Chesterton, the author writes just as pungently and vivaciously. Here was a man whose gifts not so much matched, as were complementary to, those of his more famous brother, and he it was, together with Hilaire Belloc, who rode in the front of the battle against some of the accepted evils of his time. He was a vigorous, effective and first-rate controversial writer, and such was his courage and sincerity that it led him at times almost to the point of rashness. The differences in character and temperament between the two brothers are quite obvious, and do not call for any special emphasis in these pages, but it is to be remembered to his credit that when there was a "rap" to be taken, it was Cecil who took it, and who fought it out to the bitter end. Mrs. Chesterton's account of her husband's part in the last war and of his death in hospital after the Armistice is written with intensity, sincerity, and is deeply moving.

If ever there was a child of his age, it was Richard Halliburton. Not that there have not been adventurers before; men who have sought to do strange and daring things for the sake of doing them; men who have gone forth to seek adventure where they could find it; men who in their time have been what is known in the modern vernacular as stunt artists.

Most adventurers, I suppose, have a strong streak of exhibitionism in their natures, and have, in seeking fresh fields for their escapades, an eye on notoriety, public interest, and acclaim. There was a man called Kelly, who, by earning some kind of fame by sitting on the top of flag-poles could be said to have emulated a more legendary figure, since canonized under the name of St. Simeon Stylites.

In these days, however, a man who sets out to ride over the Alps on an elephant in the manner of Hannibal, to be the first *American* to swim the Hellespont, or the first man to swim the length of the Panama Canal, or the breadth of Lake Galilee, is entitled to the certainty that he will not only be astonishing the local natives, but the readers of the popular Press of the whole wide world.

RICHARD HALLIBURTON, HIS STORY OF HIS LIFE'S ADVENTURES (Bles. 15s.) is the personal record of a modern adventurer, made possible by the fact that over a period of twenty-two years he wrote over one thousand letters to his mother and father.

This selection of them tells the quite extraordinary story of a man who not only set out to do the most amazing and seemingly impossible stunts for the sake of the notoriety they brought him, but had an ability to cash in and make a good business out of each and all of them. The list of the books dealing with his travels is as comprehensive as the subjects are sensational. They sold over a million copies, but to many millions more they were serialised and syndicated.

He cashed in on everything, from a whirl on Mount Ararat to interviewing the murderers of the Romanoffs; from flying round the world, to climbing Fuji Yama alone in winter, in terms of a syndicated number of words and of material for subsequent lecture tours. The more harebrained and fantastic the idea, the more excitement he could drum up about it, the more likely he would be able to pull it off. A South American Republic meant for him that he hoped "to hold the bones of Christopher Columbus in my hands. The Government is interested in my ability to publicise the country."

Rushing about in the Isles of Greece, tracing the route of Ulysses, he came across traces of one Rupert Brooke who so fascinated him that he declared that he would write a book on the spot "that is ever England." The book never got written. The Elephant, the Alps, Hannibal, the Hellespont, Addis Ababa, Ararat, Knossos, and a ten-thousand-dollar offer for six weeks' acting in a picture in Hollywood were some of the things which prevented it.

He died, as he had lived, in the full glare of publicity. Travelling from Hong Kong to San Francisco in a Chinese junk he disappeared, and nothing more has ever been heard of the ship or its crew, in spite of the United States Navy's very determined efforts to find it in a search which quartered over one hundred and fifty-two thousand square miles.

WILLIAM SHAKESPEARE and NOEL COWARD: By PHILIP PAGE

WILLIAM SHAKESPEARE and Noel Coward—no one, at any rate, will cavil at my putting them in that order—have been the prevailing influences in the London theatre in the last few weeks, and both have certainly prevailed. What, indeed, could be more persuasive nowadays than the final lines of *King John*, revived by the Old Vic company at the New Theatre?

"This England never did, nor never shall,
Lie at the proud foot of a conqueror,
But when it did first help to wound itself.
. . . Come the three corners of the world in arms,
And we shall shock them. Nought shall make us rue,
If Britain to itself do rest but true."

This play is not as familiar as, perhaps, it should be. Its patriotic declamations are inferior only to those in *King Henry V*, but its plot is full of somewhat obscure politics, and it is on the lengthy side. But the production at the New, by Mr. Tyrone Guthrie and Mr. Lewis Casson (who played the Cardinal remarkably well), aims at swiftness and achieves it. I liked Mr. Ernest Milton's rather epicene King John, with its sneering ill-humour; in his death-scene he looked like an odd mixture of Shylock and Parsifal. Dame Sybil Thorndike made the ill-tempered Lady Constance sufficiently stern, and Mr. Abraham Sofaer was so good as the King of France. Flourishes of trumpets and rolls of drums gave a martial air and kept awake the somnolent.

"THE TAMING OF THE SHREW."—This open-air production of *The Taming of the Shrew* revealed much to those who (a) did not know anything about Southwark Park; and (b) did not know anything of Miss Claire Luce as a serious actress. Both the park and the actress came up to expectations, to put it mildly. The former, if a somewhat remote spot for the average theatregoer, can rival Regent's Park in loveliness; the temporary stage, in its copse of plane trees, was truly rural as well as truly Elizabethan. Certain obstacles had to be overcome by those concerned—the shouts of children playing near by, the barking of dogs, and the rumble of the trams. Some of the children were quietened, or quietened themselves, by peeping through the railings and letting Shakespeare awe them into silence. This did not, however, apply to the dogs and the trams.

As for Miss Luce's Katharine, it was high up among the better Katharines I have seen; I am not so sure it was not at the top of the list for beauty, forceful rage, dignity when necessary, and immaculate diction. There has been a tendency in some quarters to display a certain degree of patronising surprise that an actress who has appeared with success in revue and musical comedy should have shown these qualities. I have seen Miss Luce within the last few months as Nora in Ibsen's *A Doll's House*, as Sadie Thompson in Maugham's *Rain*, and as Anna Christie, and am not surprised. Mr. Patrick Kinsella made a fine, lusty Petruchio, Mr. Stanley Drewitt was excellent as Gremio, and I congratulate Mr. Robert Atkins on his Grumio.

MISS CLAIRE LUCE as Katharine in *The Taming of the Shrew* in the open-air performance in Southwark Park

"BLITHE SPIRIT."—This amusing play, which is probably Mr. Noel Coward's comedy masterpiece, is already the talk of half London. There is little left for me to say except that it amused me mightily. I enjoin all to go and see it for themselves, in which case they will, I think, endorse my opinion. It is highly improbable that Mr. Coward set out to debunk spiritualism or to do anything other than evolve a masterpiece of fun. The piece, nearly every line of which is witty, owes much to the perfect performance of Mr. Cecil Parker, Miss Kay Hammond, Miss Fay Compton, and, above all, Miss Margaret Rutherford.

DUNLOP SERVICE TO THE COUNTRY AND INDUSTRY

DUNLOP SERVES *Road Transport*

In any picture of modern transport there is infinitely more of Dunlop than meets the eye. Dunlop supremacy in the tyre domain is common knowledge. What is perhaps less generally realised is that the smoothly-borne passenger of the streamlined express train owes his comfort to Dunlop rubber springs, to the deep luxury of upholstered Dunlopillo seating; Dunlop hose-pipes connect steam-heating and air-brake apparatus. In like manner, both driver and passenger of every form of road vehicle enjoy speedy travel in extra comfort by means of Dunlopillo interior upholstery. In scores of ways in which rubber is used to facilitate modern travel, Dunlop serves the needs of transport.

TYRES for
CYCLES, MOTOR CYCLES, CARS, COMMERCIAL VEHICLES, AIRCRAFT, HORSE DRAWN & TRACTOR DRAWN VEHICLES, TROLLEYS, BARROWS, PRAMS, ETC.

DUNLOPILLO UPHOLSTERY for
CARS, COACHES, BUSES, RAILWAY COACHES AND SLEEPERS, HOSE PIPES, SPRINGS, DIAPHRAGMS, BELTING AND ALL INDUSTRIAL PRODUCTS

RUBBER MUDWINGS, RUBBER FLOORING, RUBBER MATS, MOULDED RUBBER GOODS, FOR CHASSIS AND COACH-WORK OF ALL KINDS, MOTOR CYCLING BOOTS

DUNLOP

IS WORLD-WIDE IN ITS ACTIVITIES AND SERVICE

☆ DUNLOP RUBBER COMPANY LIMITED

TYRES, WHEELS, RIMS AND ACCESSORIES
RAINWEAR AND SPORTSWEAR
FOOTWEAR
INDUSTRIAL AND DOMESTIC RUBBER PRODUCTS
DUNLOPILLO CUSHIONING
SPORTS GOODS

7

UNIFORMS *par Excellence!*

HORNE BROTHERS · LIMITED

Excellence of style, quality of material—of workmanship; competent and personal service by Certificated Master Military Tailors . . . these are some of the characteristics that have made Horne Bros. the obvious choice for outfitting for all three services.

To obtain your kit within the allowance—write for Price List, and address of our nearest branch.

415-417, OXFORD ST., LONDON, W.1. (*Opposite Selfridges*)

Branches throughout London and Provinces

FOR OFFICERS OF THE **ROYAL NAVY** *AND* **MERCHANT SERVICE**

THE

NICOLL 'VITABUOY' Regd.

100% EFFICIENT

LIFE-SAVING COAT

A Regular British-Warm style Service Greatcoat which is the Best Life-Saving Garment or Appliance in the World.

ALSO IN KHAKI

FOR OFFICERS USING MOTOR-CYCLES AND OPEN CARS

WATER-PROOF . . GALE-PROOF . . FLAME-PROOF . . 4 TIMES WARMER THAN ANY WOOLLEN CLOTH COAT AND QUARTER THE WEIGHT . . 6 TIMES THE BUOYANCY OF CORK . . NO GADGETS . . JUST AN ORDINARY GREATCOAT!

Guaranteed to float wearer upright in water for at least 72 hours.

Navy or Fawn HOODS 17/6 extra Tax 3/6
Small, Med., Large sizes

POST FREE **6 GNS** TAX 12/6

NICOLLS of REGENT ST

H. J. NICOLL & CO. LTD., 120 REGENT STREET, LONDON, W.1

Telephone: Regent 1951

Dependable

Thanks chiefly to their unique gas-tight construction,★ Champion Sparking Plugs are ensuring utmost engine-efficiency with economy, and worthily contributing dependable ignition so essential to all motorised units

CHAMPION SPARKING PLUGS

CHAMPION SPARKING PLUG COMPANY LIMITED

SEALED WITH SILLMENT

★

Champion Plugs are Sillment-sealed against the leakage common to ordinary plugs. This 'miracle mineral' corrects uneven and wasteful engine-operation caused by leaky, overheated sparking plugs

GROUSE WHISKY

ESTABLISHED 1800

Famous through 7 Reigns

MATTHEW GLOAG & SON, LTD., PERTH, SCOTLAND

THE BRITISH SAILORS' SOCIETY

earnestly appeals for help

to enable them to keep pace with the urgent and increasing cost of maintaining Homes and Hostels in ports all over the Empire for our Seafarers' needs.

Donations welcomed by Hon. Treasurer, The Rt. Hon. Sir Frederick Sykes, P.C., 680 Commercial Road, London, E.14. Mr. Herbert E. Barker, Gen. Secretary.

The Girl who was *Too Popular*

IT was just a year ago that I first left home to take a secretarial job at an estate-agent's in X——.

I thought it would be rather humdrum work but my chief was awfully busy organizing Home Guard detachments and so he often left the whole office in my charge for days on end. Also I was expected to write most of the advertisements myself — all about "a little gem in safe area," etc., etc.

To tell the truth, I *loved* the work — but it wasn't exactly a rest-cure.

And then, on top of that, I made a lot of friends in X——, which is *full* of Army and Air Force chaps.

ANYWAY, after a bit I began to feel terribly tired. It came to the point when I turned down invitations just so that I could go to bed early. Not that it helped. Even after ten hours in bed I still seemed to be tired.

Then this spring I went back home to see my parents. When my mother saw me she said I looked ten years older.

It made me angry to think that other girls could work and play so hard and apparently not suffer from it as I had. So I agreed to see our old family doctor.

When he found I felt tired even when I waked up in the mornings, he said my trouble was that I wasn't getting the right kind of sleep.

He explained that there are three sleep groups. There are the people who can't sleep and lie awake listening to the clock striking. They're 3rd Group Sleepers.

Then there are the 2nd Group people (as I was) who don't feel rested even after 8 or 9 hours' sleep because they're not getting the deep, *restoring* kind of sleep.

Lastly there are the 1st Group Sleepers — the people who get lovely, deep, refreshing sleep. They feel fine even if they only get a few hours of it because it's such restoring sleep. Doctor told me to take Horlicks to help me get back into the 1st Group.

I started taking it while I was at home. What a difference it's made to me ! I wake up bright, with a feeling of *looking forward* to the day. My health seems to have improved all round. I've got more work to do than ever but I can run the office, take my turn fire-watching *and* go to parties ! All because, thanks to Horlicks, I get the recuperative benefits of 1st Group Sleep every night and no longer suffer from Night Starvation.

* * *

IN these days it is more than ever important to have the deep, restoring sleep that Horlicks brings. And Horlicks is a grand *general* "builder-up-er." It was originated at the suggestion of physicians who realized the need for a food that would be easily assimilated even by the most delicate digestion, and which *by itself* would be a complete and energizing food. This explains the great restorative power Horlicks has.

We ask the forbearance of users of Horlicks when their chemists or grocers are temporarily without stock. Every effort is being made to ensure the most equitable distribution of the supplies of Horlicks that are available.

The WAR and HOMELESS CHILDREN

Where do we go now?

2000 CHILDREN TAKEN FROM DANGER AREAS INTO **58** SPECIAL WAR NURSERIES

5700 CHILDREN TO FEED AND CLOTHE EVERY DAY

WAIFS & STRAYS

SOCIETY

OLD TOWN HALL KENNINGTON, S.E.11

Bankers: Barclays Ltd.

Traditional Superiority

THE NORFOLK HOTEL, BOURNEMOUTH

Combines all the factors that one expects to find in a First Class Hotel. RESTAURANT, GRILL ROOM, MEN'S BAR, RICHMONDE LOUNGE—the Social Rendezvous of Bournemouth—with Marcel Torrent and his Orchestra. Apartments each with P.O. Telephone and most with Private Bathroom. Telephone 7272 every room.

Resident Directors: Mr. and Mrs. F. J. McInnes

After London it is Paradise at

A 1st Class, fully equipped Licensed Hotel. Air Raid Shelter second to None entered from Hotel, in side of Hill, no steps, accommodate 100, fitted with electric light, fire, and well ventilated. A. H. Row (Prop.).

THE HYDRO HOTEL FALMOUTH

SPECIAL SUMMER TERMS FROM 4 GNS.

Not a Prohibited Area. **MIDHURST, SUSSEX**

SPREAD EAGLE HOTEL

A.D. 1430

For your leave or a restful holiday come to this historic house, where excellent food from our own farms, modern comforts and good fellowship abound, in the atmosphere of the good old times.

Telephone Nos.: Reception—Midhurst 10. Visitors—Midhurst 343. **Terms from 6 guineas.**

FORTFIELD HOTEL **Standing in its own grounds, overlooking the sea.**

SIDMOUTH S. DEVON

Self-contained Suites. Finely appointed Public Rooms. Lift and every modern convenience. H. and C. in all rooms. Fully Licensed. Lock-up Garages.

Resident Manager: Mr. E. G. Russell, Fortfield Hotel, Sidmouth, S. Devon.

Telegrams: Fortfield, Sidmouth. Telephone: Sidmouth 39

HEADLAND HOTEL, TORQUAY

Though full at the moment it is an Hotel to make a note of should you wish to enjoy quiet luxury midst peaceful surrounds

THE MANAGEMENT WILL WELCOME YOUR ENQUIRIES.

BOURNE HALL HOTEL BOURNEMOUTH

YOU CANNOT DO BETTER FOR WARTIME OR SUMMER RESIDENCE

Warm. Welcoming. Central. Billiard Room and Bridge Rooms. Plentiful Lounge Space. From 4½ gns. a week

Tel.: FIVE. Resident Directors: Mr. & Mrs. R. J. Bray

IN A HOME-LIKE COTSWOLD MANOR

THE GRANBY HOTEL, Bradford-on-Avon

Mrs. W. E. Crossman dispenses the same Comfort and Calm and fine English Cooking that was such a distinguishing feature of The Granby at Harrogate. Daily transport into Bath, 8 miles. Tel.: Bradford-on-Avon 3231

CONISTON in the Lake District

"THE SUN" A small and satisfying Hotel where peace reigns supreme

Lovely views, quiet nights and homely fare. What more do you want? Write for travel directions and details. *Tel. Coniston 48*

HAWKSTONE PARK HOTEL

Weston-Under-Redcastle

11 miles north of Shrewsbury

A first-class hotel for LONG-TERM RESIDENCE, but there are no shops, and conversely no sirens. But with its own 18-hole Golf Course, Fishing, Tennis and acres of Parkland Walks it provides capital living indeed for the country lover. Terms from £1.1.0 a day. Tel. Lee Brockhurst 224

For PEACEFUL Summer Residence Plus the warmth and good fare of a first-class hotel—

QUEEN'S HOTEL, PENZANCE

With 100 bedrooms, modern bathrooms and lift we can offer you every comfort and a full southern aspect. From 4 gns. inclusive.

Telephone: 471/472 *Telegrams: Seaward*

POSSINGWORTH PARK HOTEL,

Cross-in-Hand, Sussex

An unusually fine Country House Hotel, situated amidst 400 acres of parkland and 500 ft. above sea-level. 40 bedrooms, H. & C., Central heating and log fires. Tennis, and TROUT FISHING in our 11-acre lake. Stations: Tunbridge Wells, Lewes, Heathfield. *Telephone: Heathfield 278*

Terms from **4½ gns.**

"It's Definitely Different!" The view, locality, the cooking, the bedrooms, and the personal supervision of Miss W. M. Eliott and her Partner"—so writes Ashley Courtenay.

THE WIDE SEA GUEST HOUSE, DOWNDERRY, TORPOINT, CORNWALL

We will collect you from St. Germans Station—four miles—if necessary.

DUDLEY HOTEL

Eighty up-to-date bedrooms, each with its telephone. Twenty private bathrooms and suites. Lift. Softened water. American bar and ballroom. Resident Director, F. KUNG (Swiss). *Tel.: Hove 6266.*

Lansdowne Place, HOVE, Sussex

Ye Olde Bell Hotel HURLEY-ON-THAMES

In these abnormal times patrons for lunch or dinner are urged to book tables in advance. Ring Hurley 244, preferably 24 hours previously.

— Further to ensure their being reserved, seats must be occupied within 10 minutes of the allotted time —

THE HAND HOTEL • LLANGOLLEN

COME AND ENJOY SOME SALMON AND TROUT FISHING ON THE DEE AND STAY AT ONE OF THE BEST-KNOWN AND BEST-EQUIPPED HOTELS IN NORTH WALES

We have our own stretch of salmon water. Golf, Tennis

TERMS FROM 18/- A DAY INCLUSIVE Telephone: Llangollen 3207

MOOR HALL HOTEL NINFIELD .. .. SUSSEX

Here 250 ft. up facing due south, with beautiful country scenery, you can leave behind all war worries and enjoy fresh eggs, milk, bacon, and fresh garden produce from our own home farm and grounds. A country house with a peace-time atmosphere. Trains met Crowhurst stn.

TERMS FROM 4 GNS. TELEPHONE: NINFIELD 330

HARLEYFORD MANOR, NR. MARLOW

On the banks of the River Thames. This is the place you ought to come to for a home of peace and beauty or a really restful week-end; there is no other place so lovely in the Summertime. Double rooms only available at present.

Telephones: Hurley 239 Manager; 261 Guests.

Terms **4½ & 5½ gns** weekly, or **1 gn.** daily.

In Quest of Good Hotels

By ASHLEY COURTENAY

I HAVE been making my headquarters for the best part of a week at one of "the last houses in England." Yet it is in the centre of everything that is good—beauteous scenery, historic remains, fish-full rivers, and a grand country for hunting Master Reynard.

There is music in the name of Leintwardine when you have learnt to pronounce it ("Lent-wer-dine," with all the accent on the "dine"), and there is nothing rampant or ferocious about this "last house," the Lion, which lies beside the five-arched bridge where the Rivers Teme and Clun have just learnt to fraternise.

On the other hand, I have found it a particularly friendly Lion, and I commend it to all who are appreciative of goodness, without and within.

Stepping inside, one's first introduction is the entrance lounge, which is the rallying-ground for all thirsty folk. Here residents and passers-by mingle for "the news," "a can," or "a short one." Beyond on the left is a livable room reserved for residents. Comfort *in excelsis*, books, up-to-date periodicals, and two writing-desks, where thoughts should flow as freely as the tinkling rivers without.

Upstairs there are six bedrooms and three bathrooms, and how good it has been to splash and sleep in such clean, sunlit surroundings! Mine host and hostess have an inborn flair for innkeeping. Nothing seems to ruffle them, and that means a lot in these days of staff and supply problems, plus the irritation of that type of visitor who still expects to be spoon-fed.

But the latter will rarely be found at the Lion. It is not a place which is suitable for the long-stay resident, so the six bedrooms have a constant flow of new occupants, which is best for all concerned.

But if Leintwardine attracts you, as it has magnetised me, I was glad to find, a quarter of a mile from the village, a country-house type of hotel which will appeal to those country lovers who are on the look-out for a peaceful, homely spot where he or she can ride out the storms of war.

A strong, substantially-built house is Hightree, of the type which can be deliciously cool on a summer's day and as warm as toast in winter. It is a house where one could comfortably settle, for with the capacious bedrooms and ample reception rooms there is room to unpack and display one's personal treasures and be as friendly or as aloof as one wishes below stairs.

But what I particularly like about Hightree is, there is a distinctive personal touch. Mrs. Frances Kempe, who runs it, assumes herself every important office of Hightree government. She is Minister of Cooking, Catering and of Housekeeping. If she is a dictator in the sense that dogs, "disagreeables" or anything else which might affect the harmony of her small community are not encouraged, I believe from what I know of her, and have heard, that she is entitled to the additional office of Prime Minister of Happiness.

And where is Leintwardine? Roughly it is 8 miles from Ludlow, 13 from Leominster, 7½ from Craven Arms, and 29 from Shrewsbury. It is almost on the borders of Wales, which will account for the fact that the Lion is "the last house." There is no railway station (the nearest is Hopton Heath, two miles away); there are no sirens; there is very little in the way of shops. But there is a daily service of buses to Ludlow: there is a weekly one to Hereford, so for those who can make their own daily life, here is to be found that peace which many seek when planning leave and which other more fortunate ones can secure for the "duration."

ANSWERS TO CORRESPONDENTS

R. S., Putney.—As you do like a first-class hotel, with your golf within easy reach, let me recommend you to the Norfolk Hotel, Bournemouth, where Merrick Park Course is only about 600 yards from the hotel. Golf there is free to visitors. I do not think there are many hotels in the country to-day which offer this special facility, and I know no other hotel in Bournemouth providing free golf.

Mr. Ashley Courtenay is always pleased to advise "Sphere" readers of hotels, both large and small, known to him personally. Letters, accompanied by a stamped, addressed envelope for reply, should be addressed to him, c/o the Editor, THE SPHERE, *Commonwealth House, 1, New Oxford Street, London, W.C.1. Personal and telephone inquiries, however, cannot be accepted.*

THE SHAFTESBURY HOMES AND "ARETHUSA" TRAINING SHIP

The work of this well-known Society, which has recently passed its 98th birthday, is as much needed to-day as ever, and each day's post contains one or more applications for the admission of some poor child holding the password "need." The morning this was being written, one of the applications contained these sad facts: A father came home for a few days' leave from Active Service, only to find that his wife spent most of her time in a public-house instead of looking after the three children, whose ages were 12, 8 and 7. What a home-coming for one of our unknown heroes. This, added to war strain, unbalanced his mind, and he committed suicide. Can this Society open its doors to these and other such children in need? It rests with YOU, for voluntary support is essential to carry on. Please send a gift. Address: 164, Shaftesbury Avenue, London, W.C.2.

CONDITIONS OF SALE AND SUPPLY

This periodical is sold subject to the following conditions, namely, that it shall not, without the written consent of the publishers first given, be lent, resold, hired out or otherwise disposed of by way of Trade except at the full retail price of 1s. 6d.; and that it shall not be lent, resold, hired out or otherwise disposed of in a mutilated condition or in any unauthorised cover by way of Trade; or affixed to or as a part of any publication or advertising, literary or pictorial matter whatsoever.

FUIDGE MANOR, SPREYTON, MID DEVON

A full night's sleep seven days a week; for here in the heart of the country air raids are unknown. A Country House with every modern comfort plus Squash Court, large recreation room. Licensed Club room. 180 acres.

Telephone: Whiddon Down 205

From **5 gns.** inclusive

PEACE — COMFORT — QUALITY FOOD — IN THE HEART OF ENGLAND

WILLIAM & MARY HOTEL, STRATFORD-ON-AVON

A "Truly Beautiful Brochure" Free. *Tel.: Stratford-on-Avon 2575* Terms 5 to 7 Gns. per week

COOMBE HOUSE HOTEL, NR. SHAFTESBURY, DORSET

Away from the atmosphere of war. Situation healthy and beautiful. Every comfort. Trains met Semley by appointment.

Tel.: Shaftesbury 130

Terms from **4 gns.** for extended stay.

CLEMATIS COTTAGE HOTEL, WASHINGTON, nr. WORTHING

A haven of content and character for a week-end or longer in the fold of the Sussex Downs. Noted in particular for its cooking, and its home-made cakes, as well as for the discerning people who repeatedly stay there. Easy access to the West Sussex Golf Club at Pulborough.

Inclusive Terms from **3½ gns.**

PRINTED IN ENGLAND by THE ILLUSTRATED LONDON NEWS AND SKETCH, LTD., Milford Lane, London, W.C.2, and Published Weekly by ILLUSTRATED NEWSPAPERS, LTD., Commonwealth House, 1, New Oxford Street London, W.C.1. SATURDAY, JULY 19, 1941. Entered as Second-Class Matter at the New York (N.Y.) Post Office, 1903.

KIA-ORA

"Good Health!"

★

The only regrettable thing about Kia-Ora is that sometimes there isn't enough to go round

★

Lemon · Orange · Grapefruit
Lime Juice
2/6
Orange Barley
Lemon Barley
2/3

A Picture that will Appeal to Everyone as a Tribute to our R.A.F.

"GENTLEMEN, THE ROYAL AIR FORCE!"

by D. L. MAYS

Specially printed in full colour on plate sunk chromo art paper, ready for framing. Size of picture 17" × 12" with 1½" margin.

PRICE **5/-** EACH

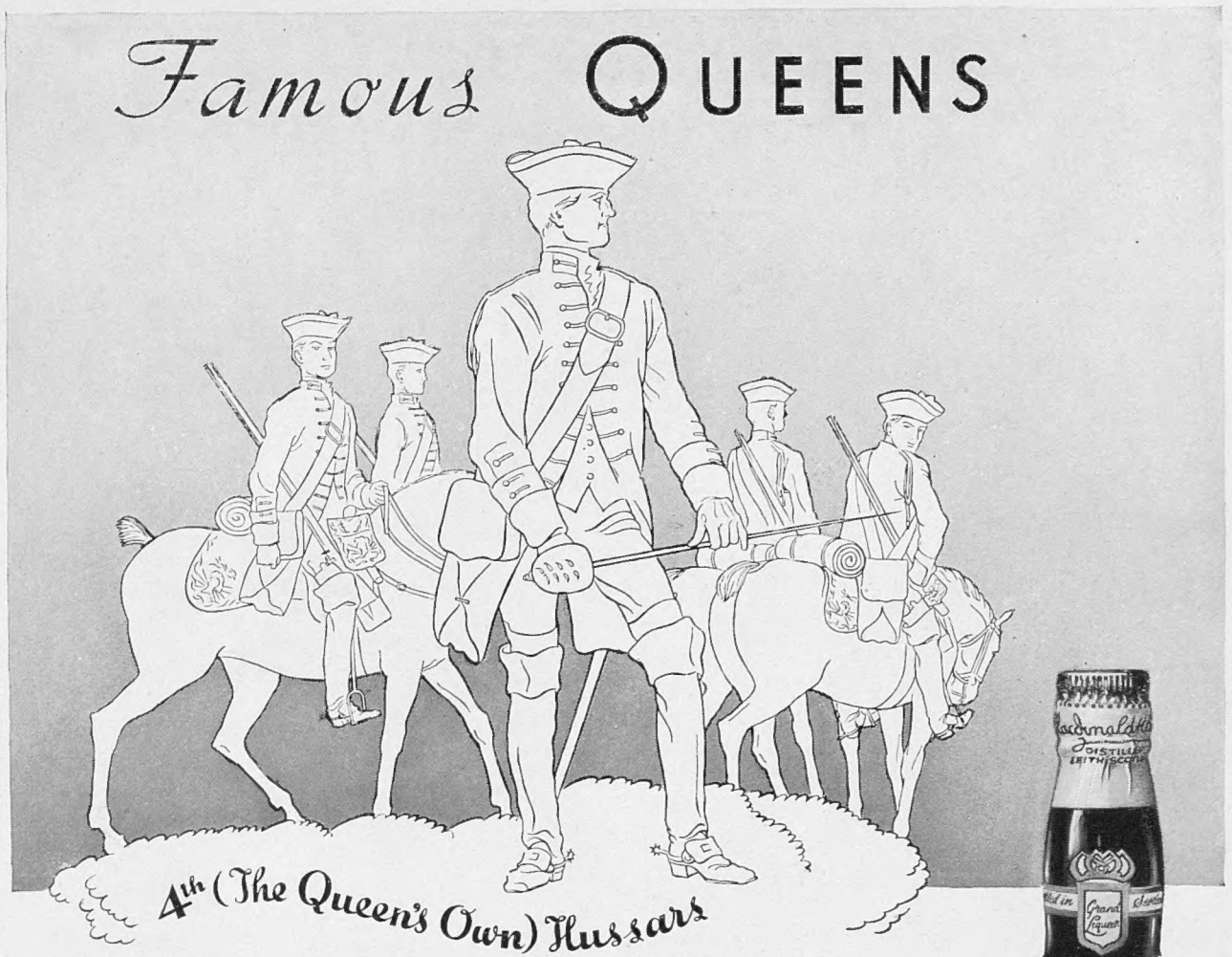
including postage. Postage abroad 1/- extra

Order with remittance should be sent to:

THE LONDON ELECTROTYPE AGENCY LTD.

134 FLEET STREET, LONDON, E.C. 4

Famous QUEENS



4th (The Queen's Own) Hussars

Raised independently and regimented under Col. the Hon. John Berkeley in 1685 as the Princess Anne of Denmark's Regiment of Dragoons. In 1788 it was ordered to adopt the title Queen's Own Dragoons. Made light Dragoons in 1818 and became Hussars in 1861.

Like this famous regiment

HIGHLAND QUEEN

GRAND LIQUEUR SCOTCH WHISKY

was originally produced independently but, unlike it, the Distillers have consistently maintained their independence up to the present day.

"HIGHLAND QUEEN" still is, as it always was, a Blend of the Finest possible Whiskies produced mainly from Distilleries owned and controlled by the Proprietors of this famous Whisky.

MACDONALD & MUIR LTD., LEITH, EDINBURGH; also GLASGOW and LONDON

We plead for LONDON

For nearly 12 months London has borne the brunt of enemy air attack. Gifts are urgently requested for our WAR RELIEF FUND, to enable our 200 Missionaries, who are living and working in the most-bombed areas, to give assistance to the homeless and others. Second-hand clothing also needed. Please address: Secretary for War Relief, LONDON CITY MISSION, 29a, Great College Street, Westminster, S.W.1

Achieve Lissom Grace and Perfect Health in AERTEX Corsetry

A GENTLEMAN always looks well dressed in Savile Row Clothes. Uniforms, Overcoats, Lounge, Dress Suits, new or worn once, by Lesley and Roberts, Scholte, Hawes and Curtis, etc. 4—10 Gns. REGENT DRESS CO. (second floor), 17, SHAFTESBURY AVENUE, W.1 (Next Café Monicc)

★ ★ ★ ALL CHEMISTS SELL

RENDELLS

FOR FEMININE HYGIENE PRODUCTS

APPROVED BY DOCTORS ★ FAMOUS SINCE 1885

If you wish, write to NURSE DREW, VICTORIA HOUSE, SOUTHAMPTON ROW, LONDON, W.C.1.

The "Arethusa" is still helping poor boys to become good sailors

Many "Arethusa" boys are now officers in the Royal and Merchant Navies

●

IMMEDIATE FINANCIAL HELP VITALLY NEEDED

●

THE SHAFTESBURY HOMES & "ARETHUSA" TRAINING SHIP

(FOUNDED 1843)

164 SHAFTESBURY AVENUE, LONDON, W.C.2

President: H.R.H. THE DUKE OF KENT, K.G.

Waterways of Holland by John Aitken

The ever-turning wheel...

It was inevitable that man should discover the use of the wheel. It is what man has since made of this discovery that has meant so much to the comforts and conveniences that we know today. The windmill and the carriage wheel, wheels for spinning, wheels for grinding. Then steam and the flashing of fly wheels — the meshing of gears. . . . Wheels turned within wheels, and out of it all came such products of perfection as the Daimler Car, the Lanchester Car, the B.S.A. Bicycle and Motor Cycle — wares outstanding as examples of what can be done by the wheel and its craftsmen.

The great B.S.A. Group who produce these wheeled masterpieces are today accomplishing other tasks in the interests of Man and the civilisation for which we are fighting. Let us honour the wheel and speed its turning!

THE BSA GROUP*

produce:

Daimler Cars
Lanchester Cars
B.S.A. Bicycles
B.S.A. Cars and Motor Cycles
Jessop & Saville Special Steels
B.S.A. & Burton Griffiths Tools
Monochrome Hardchrome Process
B.S.A. Guns and Rifles

**The Birmingham Small Arms Co., Ltd., Birmingham, 11*

PRINTED IN ENGLAND by THE ILLUSTRATED LONDON NEWS AND SKETCH, LTD., Milford Lane, London, W.C.2, and Published Weekly by ILLUSTRATED NEWSPAPERS, LTD., Commonwealth House, 1, New Oxford Street, London, W.C.1. SATURDAY, JULY 19, 1941. Entered as Second-Class Matter at the New York (N.Y.) Post Office, 1903.